DOCTOR OF CLINICAL PSYCHOLOGY (DCLINPSY)

Doctorate in Clinical Psychology : Main Research Portfolio

1) A systematic review on the effect of Video Feedback Interventions (VFI) on Parental Sensitivity in the context of attachment relationships ; 2) A comparison and exploration of burnout in clinicians working with Offenders with Personality Disorders: a Service Improvement Project ; 3) Early life Victimisation and Compliance in People with Autism Spectrum Disorders (ASD).

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Doctorate in Clinical Psychology Main Research Portfolio

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Word Counts

Critical Review of Literature paper:	**6,357**
Service Improvement Project paper:	**4,562**
Main Research paper:	**5,330**
Executive Summary:	**950**
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Main Research Project Abstract

Studies to date have failed to agree on a consensus as to whether people with Autism Spectrum Disorders (ASD) are more likely to be compliant in their behaviour. Victimisation and ostracism have been shown to increase compliance in the typically developing population. The study objective was to ascertain whether people with ASD are more compliant than typically developing individuals, using both self-report and a novel experimental test of compliance. The role of victimisation, anxiety, fear of negative evaluation and self-esteem, which have been shown to be related to increased compliance, was also assessed. A cross sectional design was utilised, and compared 19 people with ASD and 19 age and gender matched typically developing controls. The ASD group were significantly more compliant on self-reported compliance compared with the control group. However, no differences were found in observed compliance. Of the psychological constructs, only anxiety was found to be significantly higher in the ASD group. In the ASD group, there appeared to be a relationship between higher levels of past victimisation and self-reported compliance, with this relationship trending towards significance. Hierarchal multiple regression demonstrated that a significant amount of the variance in self-reported compliance was accounted for by fear of negative evaluation and a history of victimisation. These results would suggest that individuals with ASD who have experienced victimisation and ostracism are also likely to have a tendency towards over compliance; this finding has important implications across a range of settings.

Keywords: Autism, Compliance, Bullying, Victimisation

Service Improvement Abstract

Purpose: The present paper examines levels of clinician burnout in a community forensic Personality Disorder (PD) service, and explores how burnout may arise and be minimised within a service of this nature.

Design/methodology: A mixed methods approach was utilised, assessing levels of burnout and making comparisons with a comparable previous study. Qualitative data regarding burnout and suggestions for reducing the risk of burnout was gathered via a focus group and analysed using thematic analysis.

Findings: Levels of burnout were found to be higher than in previous research and the sample met the threshold for 'high' burnout in terms of Emotional Exhaustion. Qualitative data suggest that working in a forensic PD service can be "toxic", with contributing factors to burnout being risk and complex cases, and not taking regular breaks. Minimising burnout might be achieved by developing resilience, utilising humour, ensuring that breaks are taken, and developing one's own strategies for "releasing pressure".

Limitations: The sample comprised of nine clinicians, thereby creating difficulties with generalisability of results.

Practical implications: The risk for burnout in clinicians working with offenders with PD may be higher than other groups of mental health clinicians. Despite this, attempts to minimise burnout can be made through a range of strategies, including regular team lunches and the introduction of resources to assist new and existing employees within the service**.**

Originality/value: This is the first project to assess levels of burnout specifically in a team of clinicians working with offenders with PD, and offers an exploration of how burnout may manifest and how it can be managed in this unique area of mental health. Practical ways of reducing burnout have resulted from the project and will be implemented by the service.

Keywords: Personality Disorder, Burnout, Stress, Forensic, Offenders, Clinicians

Critical Review of the Literature Abstract

Background: Parental sensitivity has been found to be associated with increased attachment security in children and young people, which is associated with increased well-being and decreased psychological distress later on in life. Video feedback is a brief method by which sensitive parenting practices can be increased, however, previous reviews have failed to comment on whether improvements are maintained.

Objective: To ascertain whether video feedback interventions are efficacious in improving parental sensitivity in caregivers compared with alternative treatments. The long term effects of video feedback on parental sensitivity and potential moderating/mediating variables was also reviewed as well as the methodological quality of the studies.

Method: Relevant studies were identified and reviewed using a systematic review.

Results: In total, 13 of the 14 studies demonstrated significant improvements in parental sensitivity post-intervention. However, none of the five studies that assessed longer term improvements demonstrated maintained effects at follow up. The majority of studies utilised adjunctive intervention components in addition to video feedback, none of which employed a component analysis, making firm conclusions about the efficacy of video feedback as a standalone treatment method difficult to ascertain. The methodological quality of the studies was variable.

Conclusions: Video feedback based interventions are brief interventions that can be utilised in clinical practice to increase parental sensitivity in the short term, however, improvements appear to be diminish with time. Social factors (e.g., poverty) may contribute to a lack of sustained improvement. Further research should look to utilise component analyses of interventions, and give attention to increasing parental sensitivity in fathers who were poorly represented in the reviewed studies.

Keywords: Video, Feedback, Parental Sensitivity, Attachment

Critical Review of the Literature paper

A systematic review on the effect of Video Feedback Interventions (VFI) on Parental Sensitivity in the context of attachment relationships

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Target Journal: Clinical Psychology Review

This journal was chosen as it has previously published literature reviews in the area of video feedback interventions for improving parental sensitivity. The journal also has a high impact factor.

Introduction

The delivery of effective interventions that improve parent-child relationships is a growing area of interest to policy makers and healthcare practitioners (Kennedy, Landor, & Todd, 2010). A central idea is that a secure attachment relationship between a primary caregiver (e.g., parent) and infant is an important factor for the development of the infant (Juffer, Bakermans-Kranenburg, & van IJzendoorn, 2012). Consistent early life parenting experiences are consistently correlated with higher adult self-esteem (Huis in't Veld, Vingerhoets, & Denollet, 2011) and predict later relationship satisfaction (Kane et al., 2007). However, the infant may develop insecure attachment styles or representations as a result of disruptions in the caregiver-infant relationship (Carr, 2013). Research has also found a robust association between disrupted care giving behaviour and subsequent difficulties for the infant in forming relationships later on in life (De Haene, Grietens, & Verschueren, 2010). Adverse childhood experiences including neglect or abuse can have a powerful relation with future adult mental health difficulties (van der Kolk, 2003), with an increased risk of future difficulties with depression, attempted suicide, and substance abuse (Felitti et al., 1998). Further to this, without intervention, there is an increased risk that styles of parenting become transgenerational (Parkes, Stevenson-Hinde, Stevenson-Hinde, & Marris, 2006; Rholes, Simpson, & Friedman, 2006). Therefore, attention should be given to interventions that look to improve parent-child relationships in order to improve a range of psychological, social and health related outcomes in later life.

To date, a range of interventions have been developed to improve the quality of the parent-child relationship; typically, these utilise behavioural parent training approaches based on Social Learning Theory (O'Connor, Matias, Futh, Tantam, & Scott, 2012; Wyatt Kaminski, Valle, Filene, & Boyle, 2008), Mentalization based approaches to understand the thoughts and mind of the infant (e.g., "Mellow Babies" (Barlow & Svanberg, 2009) and Dyadic Developmental Psychotherapy (Becker-Weidman, 2006). Generally, the efficacy of these interventions to improve the parent-child relationship, and subsequent attachment style, is mixed.

Video feedback interventions (VFI) are based on filming parent-infant interactions with the aim of improving this relationship. The therapist guides the parent to resolve their relationship difficulties through increasing their sensitivity to their child

and attunement in interactions. Broadly speaking, VFI gives parents the opportunity to reflect on their behaviour, drawing attention to successful interactions and supporting changes that will enhance attunement and sensitivity to the child (Kennedy et al., 2010). Some of the most well-established schools of VFI include Video Home Training (Jansen & Wels, 1998), Video Interaction to Increase Positive Parenting (Juffer et al., 2012) and more recently Video Interaction Guidance (Kennedy, Landor, & Todd, 2011). The changes in names of the various forms of VFI reflect different styles, cultural backgrounds and professions of the developers (Kennedy et al., 2010). Despite the variety of VFI approaches, all share the same premise of increasing parental sensitivity by observing positive interactions between the parent and infant; improving parental sensitivity is a central goal of video feedback interventions, which refers to the ability of the caregiver to perceive and accurately interpret the signals and communications implicit in an infant's behaviour which therefore gives rise to a parental response that is appropriate and prompt (Ainsworth & Wall, 1978).

Attachment theory has been described as one of the most comprehensive theories in modern psychology (Rholes & Simpson, 2006). The first relationship and bond that an infant will experience is that with its primary caregivers (Ainsworth, 1969) and this relationship will set expectations and assumptions about how the social world works (Parkes et al., 2006). The concept of Attachment Theory was initially formulated by John Bowlby and subsequently furthered by Mary Ainsworth (Rholes & Simpson, 2006). Bowlby developed a growing interest in the link between maternal loss and deprivation, and later personality development (Bretherton, 1992). There is a strong evidence base for biological theories that suggest infants are predisposed to form attachment relationships (Baradon, 2009; Schore & Schore, 2008) and this has been viewed as a survival mechanism to navigate the first months of life (Bowlby, 2005) whereby infants use their caregivers as a safe base from which to explore the environment. In turn, parents should be able to adequately respond to an infant's distress with comfort and reassurance (Cassibba, Castoro, Costantino, Sette, & Van IJzendoorn, 2015). It is generally regarded that there are four attachment categories or 'styles'; secure, anxious, avoidant and fearful avoidant (or 'disorganised'; (Rholes & Simpson, 2006). Secure styles are shown to correspond with children who have experienced consistent parental responses, and insecure styles (avoidant, anxious and disorganised) are potentially indicative of disrupted, inconsistent or even traumatic early life relationships with caregivers (Obegi & Berant, 2010).

As interest in the method of video feedback increases, so do studies assessing the efficacy of such interventions. In a meta-analysis of studies to increase parental sensitivity, Bakermans-Kranenburg, Van IJzendoorn, and Juffer (2003) found that VFI compared favourably with other programs (such as psychoeducation), in terms of improving parental sensitivity in the parent-child relationship (*d* = 0.33). Furthermore, the review found the most effective interventions used a modest number of sessions and often had a clear behavioural focus. There are several points of note here; firstly, the modest effect size by which parental sensitivity improved, calling into question the efficacy of the interventions used to increase sensitive parenting. Secondly, the hypothesis that interventions of shorter duration were more effective; this hypothesis was specifically examined in a meta-analysis undertaken by Fukkink (2008) in which it was found that indeed briefer VFI (less than 7 sessions, *d* = 0.68) were more effective than longer programmes (*d* = 0.27). In summary, this would suggest that briefer VFI interventions may demonstrate favourable outcomes. However, there a number of shortcomings associated with the aforementioned review papers; Fukkink (2008) failed to appraise or assess the included studies in terms of their methodological rigour and failed to offer an assessment of the quality of the research design. This was also a shortcoming of the Bakermans-Kranenburg et al. (2003) review. This would suggest that a review assessing the methodological quality of studies investigating the relationship between VFI and parental sensitivity is timely and warranted. If demonstrated that studies utilising sound methodology, with brief and therefore cost-effective interventions, are efficacious in improving parental sensitivity this may be an attractive prospect for service commissioners where improvements in the quality of the attachment relationship are desirable.

VFI have developed significantly since their first introduction. ‘Strength-based’ video interventions have become the focus of improving parental sensitivity over the last 20 years. This refers to the idea of building upon the positive aspects of parenting behaviour that already exist, and drawing attention to these positive parenting practices. This compares with older styles of video interventions that tended to focus on teaching parents skills to overcome their difficulties with their children (Kennedy et al., 2011). Indeed, Fukkink’s (2008) review failed to make the distinction between studies that employed strength-based interventions and looked to build upon existing parental skills, and interventions that were based on teaching, directing or coaching parents to be ‘better’. For example, a study by Seifer, Clark, and Sameroff (1991) was included in the review and describes that maternal

responsivity was modified by coaching mothers of children with developmental disabilities, whereby the therapist suggested how the mother could behave in a more contingently responsive manner. Although deemed to be effective, this method of teaching is not consistent with the modern principles of VFI which stress the importance of filming and reviewing clips that demonstrate positive interactions which is seen as a fundamental component of the change process (Kennedy et al., 2011). This highlights the need to undertake a review of studies that share similar theoretical underpinnings and those featuring strength-based designs, to ascertain efficacy of such interventions.

The long term effectiveness of video feedback for improving parental sensitivity is poorly understood, and was not commented upon in Fukkink's (2008) review. It seems a necessary direction of enquiry to understand if VFI can demonstrate longer term and sustained benefits, given the aforementioned psychological and social difficulties that infants may develop if parenting is consistently insensitive.

Therefore, the aim of this review is to consider three questions;

1. Are strength-based VFI an efficacious intervention for improving parental sensitivity?
2. What is the quality of the studies that have assessed strength-based VFI in the context of improving parental sensitivity?
3. When taking into account the quality of the studies being reviewed, is the previous 'less is more' hypothesis (briefer interventions producing superior results) substantiated?

Method

Search strategy

A comprehensive search of a range of electronic databases was undertaken to identify studies that were relevant to the research questions. These databases were: PsychInfo, PubMed, Science Direct and the Cochrane Library. A meeting took place between RC and the University librarian to identify ways in which to maximise the return of potentially relevant studies. In terms of specific search terms, the terms

were primarily based on those used in Fukkink (2008). Following this, the following search terms were used: ["self-model*, self-confrontation, self observation, feedback, playback, parental training, intervention, treatment and video*"], and were combined with terms relating specifically parental sensitivity; [parent*, family*, child*, marital, mother*, father* parental sensitivity, maternal sensitivity, paternal sensitivity, sensitivity]. The order and format of terms was adapted based on the input method of the individual databases, but wherever possible, terms were used as closely to the aforementioned order as possible. Following this, the references of identified papers were screened to identify further studies that may be relevant to the research questions that may have not been identified in the initial search (Figure 1).

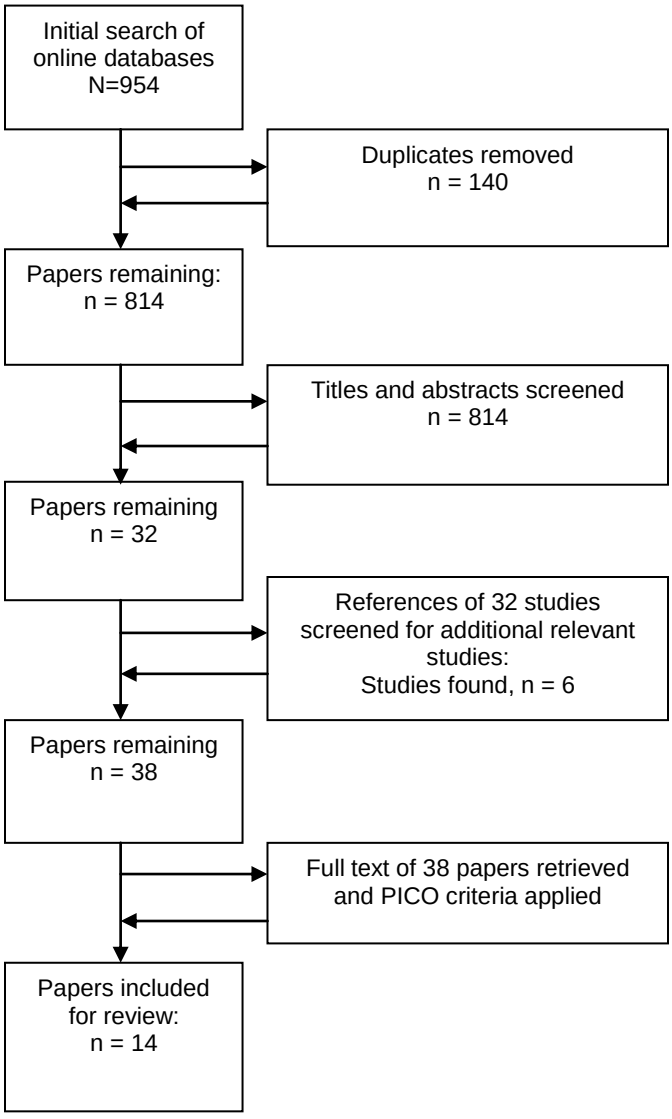

Figure 1: Study Selection

Study Eligibility Criteria

Based on the premise that modern VFI are primarily strength based interventions and inherently different to those undertaken more than 20 years ago, studies published between the dates of 1995 and 2015 were included. Papers published during this period that utilised visual psychoeducation were also excluded for this reason.

Inclusion criteria. Studies were required to meet participant, intervention, comparator and outcome (PICO) criteria in order to be eligible. Participants were defined as caregiver and infant dyads (mothers, fathers, foster carers and professional caregivers). No age restriction was placed on parents or children. Furthermore, no restrictions were placed on characteristics of participants (e.g., mental health diagnoses, level of education) in an effort to demonstrate the versatility and diversity of the groups with whom VFI are utilised. Studies met inclusion criteria if they wholly utilised VFI, or studies in which VFI had constituted a significant part of the intervention. 'Significant' was defined as more than half of intervention sessions specifically utilising VFI. Studies were eligible if they utilised experimental, quasi-experimental or case controlled designs, where at least one control group was present. Studies that featured a standardised measure of parental sensitivity (or adapted version of a standardised measure) were included. Studies published in peer reviewed journals were included, to enhance the methodological quality of the studies that were used for analysis.

Exclusion criteria. Meta-analyses, literature review papers, single case designs and dissertations were excluded from analysis. Whilst excluding review papers and unpublished literature has the potential exclude useful findings, this was felt necessary due to the large number of single case designs utilising VFI where no control condition was present.

In summary, the primary PICO criteria was constructed:

Population:	caregiver and infant dyads (mothers, fathers or foster carers)
Intervention:	modern VFI interventions
Comparator:	Alternative treatments
Outcome:	Parental sensitivity as a primary or secondary outcome measure
	Long term parental sensitivity

Study Selection

Following individual searches of online databases, publication titles and abstracts were imported to an electronic reference manager programme. Duplicate papers were removed at this point (see Figure 1 for study selection process). Following this, titles and abstracts were screened in line with the eligibility criteria for the review and those that did not meet eligibility criteria were removed. The full text of the remaining studies was retrieved. Following this, the reference lists of all of the identified studies were screened to identify further papers that may be eligible for inclusion. Again, the full text for these papers was retrieved. All eligible studies were read in full and data extracted to a table featuring bibliographical information, primary aims, study design, participant demographics, an overview and session count of VFI and comparison interventions and outcome data specific to parental sensitivity (Table 1). Table 2 summarises each study and whether a significant effect of VFI on parental sensitivity was found at post intervention and follow up (if applicable).

Table 1: Data synthesis table

	Authors and year	Aims	Design	Participants	Intervention		Measures and time points for assessments	Findings
					VFI description and no. Of sessions	Comparison		
1	**Cassibba, Castoro, Costantino, Sette and Van IJzendoorn (2015)** **Italy**	To ascertain whether VFI enhances maternal sensitivity and attachment security in an Italian sample. To investigate whether VFI are more efficacious for mothers with insecure attachment representations.	Non randomised, experimental design Dyads were followed were assessed at 6 months and then again at 13 months – intervention was delivered at 7 months	Total n = 32 mother-infant dyads VFI, n =16 (mean age: 32.13 (2.06)) Controls, n = 16 (mean age: 33.94 (5.38)) Matched on attachment style classification	5: VFI + discussions relating to mothers early life experience	2 'dummy visits' (general advice) and sessions of mother-infant recordings were made but not reviewed	AAI SSP EAS T1 = pre intervention T2 = post intervention	• Significant effect of intervention on post test maternal sensitivity, F(2, 27) = 7.70, p = .002. • Maternal attachment style significantly associated with post test maternal sensitivity and infant attachment security, F (2,27) = 3.94, p = <0.01 • Sensitivity of mothers with insecure attachment style was significantly enhanced by the intervention (intervention mean = 24.41, control mean = 18.41)
2	**Høivik, Lydersen, Drugli, Onsoien, Hansen, and Nielsen (2015)** **Norway**	To investigate the maintained effect (6 months) of VFI on parental sensitivity. To ascertain whether parental mental health moderated the effects of VFI	Naturalistic longitudinal multi-site RCT in urban and rural samples in Norway. Parallel- group, consecutively randomized single-blinded design.	Total n = 132 (mean age = 29.7 (5.6)) VFI, n = 75 Controls, n = 57	8: highlighting mother responses to infant initiations; naming of child intentions and emotions; following the child's lead; homework tasks in between sessions	TAU – regular visits from healthcare workers, specifically told not to use VFI	EAS BDI ASQ Assessment of parental personality traits T1 = pre intervention T2 =3 months T3 = 6 months	• Short-term effect of VFI on parent–child interactions (p = 0.03). • No long term effects (6 months) of intervention on maternal sensitivity, p = 0.49 • For mild to moderate depressive symptoms (BDI total score of 15 - 25 points), increases in maternal sensitivity post treatment observed (9.12 to 29.16, p = <0.001)

3	**Hoffenkamp et al. (2014)** **Netherlands**	To investigate the effectiveness of hospital-based VFI for mothers and fathers of infants born prematurely (25–37 weeks of gestation)	Randomised Controlled trial	Total n = 150 families (150 infants, mothers and 144 fathers) VFI n = 75 VFI, (mean age mothers = 31.1 (4.9), fathers 34.1 (5.4)) Control n = 75 (mean age mothers = 30.8 (5.4), fathers = 33.6 (5.5))	3 sessions of VFI: 95% mothers, 83% fathers attended all three sessions, respectively Sessions focused on video clips and freeze frames of positive interactions; sessions were tailored to the individual needs of families	TAU (hospital care)	Sensitivity to Nondistress and Positive Regard for the Infant PPB MBI YIPTA EPD STAI STAXI PSS TES T1 = Baseline T2 = mid-intervention)3 weeks), T3 = 3 month T4 = 6 months	• Significant intervention effects on parental sensitivity in mothers (*d* range = .24 –.44) and in fathers (*d* range: .54 –.60). • Effects of VFI particularly observed in mothers who experienced preterm birth as very traumatic (*d* range = .80 –1.04).
4	**Smith, Dishion, Moore, Shaw, and Wilson (2013)** **USA**	To investigate whether adding a VFI component to family check up (FCU) intervention have positive effects on parental relational schema, and whether this resulted in reduced caregiver coercive interactions. Utilised infants with externalising behaviours To investigate whether this effect was maintain at aged 2 and subsequently aged 5.	Quasi-random experimental design	79 High risk families (77 mothers, 1 father, 1 foster carer) FCU + VFI: 23 23 families used VFI 63 controls Mean ages and SDs not reported	An adjunct VFI was used at the discretion of the therapist	FCU without VFI component	COACH system FAA RACS	• The VFI group child age 2 assessment predicted reduced caregivers' negative relational schemas of the child at age 3 (r=-.35), acting as a moderating variable on observed parent–child coercive interactions at age 5 • No significant effect of VFI on caregiver coercive interactions aged 5 (r = -.16)
5	**Spieker, Oxford, Kelly,**	To ascertain whether promoting VFI is efficacious	Quasi-random experimental	210 dyads (foster parents)	10: Intervention based on	3 visits of education	NCAT TMB	• Significant improvements in parental sensitivity in the VFI group (*d* =.41)

	Nelson, and Fleming (2012) **USA**	for improving caregiver sensitivity in children placed within foster families	design	VFI, n =105 (caregiver mean age = 36.50 (10.95) Control, n = 105 (caregiver mean age = 35.39 (10.98)	psychoeducation of young people in foster care; 5 out of the 10 treatment sessions were specifically VFI; guided discussion around videotapes focussing on parenting strengths and identifying and interpreting the child's cues	support (15% of sample only had one or two visits) Intervention comprised on visits from worker, signposting etc.	RAB PSI TAS BITSEA IPCI Baseline, post-intervention, 6 month follow up	• No group difference in sensitivity at 6-month follow-up , *d* =.29 • No significant changes at follow up in attachment security of infants, *d* = .06
6	**Moss, Dubois-Comtois, Tarabulsy, St-Laurent, and Bernier (2011)** **Canada**	To ascertain whether a short term home visiting intervention improved parental sensitivity in maltreated children, or children suspected of maltreatment	Randomized controlled trial	67 dyads (mother-infant) All families known to welfare services for reported/actual abuse and/or neglect VFI = 35 (27.70, 7.86), child (3.29, 1.40) 32 control (28.31, 6.76), child 3.60, 1.36)	8 sessions of therapy, combining VFI and attachment and psychoeducation Sessions followed the structure of; initial discussion; filming of interactions; discussion of interactions; highlighting progress to date In addition, TAU (Monthly visit from welfare worker)	Monthly visit from welfare worker	CBC MBQ SSP Baseline and post intervention	• Parental sensitivity improved following the intervention, compared with the control group (*d*=0.47) • Child age moderated both intervention and control groups in terms of internalizing and externalizing problems • Insecure children in the VFI were regarded as secure in attachment style post intervention (42.9%) and significant percentage became secure from previously disorganised (37.1%)
7	**Groeneveld, Vermeer, Van IJzendoorn, and Linting**	VFI was adapted for home-based child care givers providing care for infants to ascertain if improvements in	Randomized parallel controlled trial	50 caregiver-infant dyads VFI = 25 (43.30,	6 home visits, with a specific phase on sensitivity ,	6 telephone calls relating to participants talking about the	CIS IT-HOME Idiosyncratic	• No significant effects of time (*p* = .22) or group, (*p*= .13) were present for observed caregiver sensitivity.

	(2011) **Netherlands**	caregiver sensitivity were evident		9.23) Control = (40.36, 8.80) All care givers provided full time paid care giving	empathy, when to use sensitive 'time out'. Brochure also given on concepts discussed during sessions	development of the infant. No input relating to sensitivity	measure of sensitivity Pre and post intervention	
8	**Kalinauskiene et al. (2009)** **Lithuania**	To assess VFI in low sensitive first time mothers High reactive infants and low reactive infants	Randomized controlled trial	53 mother-infant dyads VFI = 26 (Child (6.12 (0.08)) Control = 28 (child age = 6.11 (0.06) Age of mothers between groups = 26.4 (2.94)	5 home visits; consisting of traditional VFI format of reviewing footage of interactions and then discussions taking place regarding the videos Mothers also given brochures relating to parental sensitivity	5 phone calls over the course of 5 months. No discussion of parental sensitivity; instead discussions related to the infant's development	MAS AQ-set Idiosyncratic measure of infant temperament DHS BDI PEQ	• Significant improvements in mother sensitivity in the intervention group (*d* = 0.78). • No significant effect of intervention on child attachment security post intervention (*p*=0.99)
9	**Stolk et al. (2008)** **Netherlands**	To assess the intervention process of VFI, and whether alliance was an important factor in changes in parental sensitivity.	Process evaluation (based on previous randomized controlled trial: see below)	120 mother-infant dyads N = 117 (randomly allocated) controls Children had high externalising problems Age of mothers between groups:	6 sessions (4 per month, then one every other thereafter) focussing on improving parental sensitivity	6 telephone calls	Erickson Scales (Intrusive and supportive presence Idiosyncratic measure of maternal discipline Idiosyncratic measures of therapeutic alliance Idiosyncratic measure of implementation of skills Idiosyncratic	• Alliance between the therapist and mother predicted increased parental sensitivity, (r = 0.29) post intervention

				= 33.16 (4.39)			measure of satisfaction with intervention	
10	**Van Zeijl et al. (2006)** **Netherlands**	Whether VFI is effective in improving parental sensitivity in children with high levels of externalizing behaviour Focus on parental discipline as well as parental sensitivity	Randomized controlled trial	120 mother-infant dyads N = 117 (randomly allocated) controls Children had high externalising problems Age of mothers between groups: = 33.16 (4.39)	6 sessions (4 per month, then one every other thereafter) focussing on improving parental sensitivity Information also provided on general child development	6 telephone calls	DFP Cantrill Ladder ICQ CBCL ATP	• Maternal sensitivity was significantly improved using VFI compared with controls, F (3,233) =4.19, *p* = .01
11	**Klein Velderman, Bakermans-Kranenburg, Juffer, and Van IJzendoorn (2006)** **Netherlands**	To investigate whether improving parental sensitivity using VFI would mediate school externalising behaviours in young children. Mothers had higher levels of insecure attachment representations	Randomized controlled trial	N = 81 mother-infant dyads Control n = 27 VIPP = 28 VIPP-R = 26 Mean age of mothers = 27.8 (3.63)	VIPP: Standard video feedback, featuring filming of interactions and then reviewed by the therapist and mother VIPP-R = additional discussion relating to representations		AAI CBC MSS EAS SSP IBQ SSQ GHQ 6 months pre intervention Post intervention Delayed SSP administered (40 months) to assess changes in attachment representation of infant	• VIPP and VIPP-R mothers significantly more sensitive than controls post intervention, *d* = 0.46, • No long term (40 month) effects of VIPP or VIPP-R were found for improvements in maternal sensitivity (*d* = 0.04) • No significant effects on child attachment classification, *d* = 0.05
12	**Stein et al. (2006)**	To ascertain whether VFI for improving mother-child interactions in bulimic	Randomized controlled trial	N = 80 VFI n = 40	13 sessions, focussing on negotiating	Counselling (13 sessions)	Idiosyncratic measure of conflict	• Post intervention, 23.7% in the video-feedback group showed episodes of marked or severe conflict, compared

	UK	mothers was efficacious (specifically with regards to the outcomes of reduced mealtime conflict, infant weight and autonomy)		(median age = 31) Control n = 40 (median age = 29) Infants participated between 6 and 12 months of age	interactions with young children (principally during mealtimes) Both groups also received guided self-help CBT for their eating disorders		Idiosyncratic measures adapted from MSS	with 53.8% control subjects (odds ratio=0.27, confidence interval=0.10 to 0.73). • VFI exhibited significantly less conflict at mealtimes than controls (p = 0.007). • Inappropriate verbal responses to infants during mealtimes reduced in the VFI group, but not significantly (p = 0.053)
13	**Juffer, Bakermans-Kranenburg, and Van IJzendoorn (2005)** **Netherlands**	Undertook VFI for to improve attachment representations in mothers with insecure avoidant and insecure preoccupied styles of attachment	Randomised Controlled trial	n = 130 adoptive/birth mother and infant dyads VFI + Personal book = Personal book = Control = No reported age of mothers/adopted mothers	Sensitive parenting book (written information focussing on sensitive parenting) plus three sessions of VFI (filming and reviewing of clips)	Sensitive parenting book only Control = none	MSS SSP Main and Soloman Coding System of Disorganised Attachment Style Temperament Questionnaire	• VFI plus diary completion significant improved sensitivity, d= .65 (families without birth children: d = .65 and families with birth children: d = .63 • Children of mothers receiving VFI + book were less likely to be classified as disorganized attached post intervention (d = .46), and received lower scores on the rating scale for disorganization than children in the control group (d = .62)
14	**Bakermans-Kranenburg, Juffer, and Van IJzendoorn (1998)** **Netherlands**	To investigate whether lower middle class mothers who had insecure attachment representations	Quasi experimental randomised controlled trial	n = 30 mother-infant dyads (mother mean age = 28.6) VFI = 10 VFI plus discussions on attachment n = 10 Controls n = 10,	VFI and VFI plus discussions = 4 sessions VFI = 4 sessions of pure VFI VFI + = 4 sessions of pure VFI with the addition of discussions relating to mothers early	Unclear	AAI MSS Pre and post intervention	• Both intervention groups demonstrated significant improvements in sensitivity, d = 0.87 • No differences in sensitivity post intervention between either VFI group d = 0.03, p= 0.94, • Insecure dismissing mothers tended to profit more from video feedback, whereas mothers with insecure preoccupied tended to benefit more from video feedback and discussions regarding their own attachment style,

	Infant age 7-10 months	life experiences are attachment representations		*d* =0.65

AAI (Adult Attachment Interview); SSP (Ainsworth Strange Situation Procedure); EAS (The Emotional Availability Scale); BDI (Beck Depression Inventory); ASQ (The Ages and Stages Questionnaire); PPB (Post Partum Bonding Questionnaire); MBI (My Baby and I Questionnaire); YIPTA (Yale Inventory of Parental Thoughts and Actions); EPD (Edinburgh Post-natal Depression Scale); STAI (State-Trait Anxiety Inventory); STAXI (State-Trait Anger Inventory); PSS (Parental Stress Scale); TES (Traumatic Event Scale); FAA (Family Affective Attitude Rating Scale); RACS (Relationship Affect Coding System); NCAT (Nursing Child Assessment Teaching Scale); This Is My Baby (TMB); RAB (Raising A Baby); PSI (Parenting Stress Index); TAS (Toddler Attachment Sort); BITSEA (Brief Infant Toddler Social and Emotional Assessment); IPCI (Indicator of Parent Child Interaction); CBC (Child behaviour checklist); MBQ (Maternal Behaviour Q-Sort); CIS (Caregiver Interaction Scale); IT-HOME (Infant Toddler Child Care Home Observation for Measurement of the Environment inventory); MSS (Ainsworth's Maternal Sensitivity Scale); AQS (Attachment Q-Set); DHS (Daily Hassles Scale); PEQ (Parental Efficacy Questionnaire); ATP (Attitudes toward parenting); DFP (Dutch Family Problems Questionnaire); ICQ (Infant Characteristics Questionnaire); IBQ (Infant Behaviour Questionnaire); SSQ (Support and Stress Questionnaire); GHQ (Patient Health Questionnaire)

Table 2: Summary of Effects

Study	Significant effect in parental sensitivity as a result of VFI	Size of effect	Maintained effect (6 months or after)	Size of effect at follow up
Cassibba et al. (2014)	Yes	*p* = .002	Not assessed	Not assessed
Høivik et al. (2015)	Yes	*p* = 0.03	No	*p* = 0.49
Hoffenkamp et al. (2014)	Yes	Mothers =.24 –.44, fathers = .54 – .60	No	Not reported
Smith et al. (2013)	Yes	r =- 0.34	No	r = -0.16
Spieker et al. (2012)	Yes	*d* = 0.41	No	*d* = 0.29
Moss et al. (2011)	Yes	*d* = 0.47	Not assessed	Not assessed
Groeneveld et al. (2011)	No	*p* = .13	Not assessed	Not assessed
Kalinauskiene et al. (2009)	Yes	*d* = 0.78	Not assessed	Not assessed
Stolk et al. (2008)	Yes	*p* = 0.01	Not assessed	Not assessed
Van Zeijl et al. (2006)	Yes	*p* = 0.01	Not assessed	Not assessed
Klein Velderman et al. (2006)	Yes	*d* = 0.46	No	*d* = 0.04
Stein et al. (2006)	Yes	*p* = 0.007	Not assessed	Not assessed
Juffer et al. (2005)	Yes	*d* = 0.65	Not assessed	Not assessed
Bakermans-Kranenburg et al. (1998)	Yes	*d* = 0.87	Not assessed	Not assessed

Quality Assessment

Quality assessment is an important part of research (Fink, 2010). The tools used to assess the quality of studies in the current review were the Critical Appraisal Skills Programme (CASP) checklists (CASP, 2013). CASP provides checklists for randomised controlled trials and case controlled series (see Appendix A and B). Each respective checklist contains 11 quality standards (e.*g., Have the authors taken account of the potential confounding factors in the design and/or in their analysis?*). The study was assigned one point for each standard which was met from the relevant CASP form, comprising a total quality score out of 11. An overall quality score was then expressed as a percentage (see Tables 3 and 4) to give an indication of overall quality (range = 0 – 100%).

Quality Assessment Findings

Tables 3 and 4 provide a summary of quality assessment scores. The quality of studies, as assessed using CASP, varied between studies. Three studies were deemed to have quality of 90.9%, one of 81.8%, seven of 72.7%, 1 of 63.3% and the remaining two had 54.5%. Of the three studies that achieved 90.9% quality (Stein et al., 2006; Cassibba et al., 2015; Moss et al., 2011) two were randomised controlled trials and one was a case controlled series (Stolk et al., 2008). In both randomised controlled trials, assessments of sensitive interactions were observed by researchers who were blind to treatment group.

Studies deemed to be of poorer quality (Spieker et al., 2012; Stolk et al., 2008) both achieved 54.5% quality overall. Typical reasons for lower quality in these studies related to issues including unclear reporting as to whether researchers were blind to participant group (Spieker et al., 2012) and a lack of controls for confounding variables (Stolk et al., 2008). Several studies did not report parent ages, which may be an important variable in understanding for which groups VFI is efficacious. A lack of generalisability of results featured in some studies; for example, Hoffenkamp et al. (2014) excluded parents who felt that they had a poor understanding of the native language, which suggests a lack of representativeness given the multicultural nature of the country in which the study was undertaken (The Netherlands).

Drop out and attrition rates were reported by all studies, as were the number of parent-infant dyads used in analyses. In all studies, results were reported which were consistent with data analysis plans. Effect sizes were not reported in a number of studies; Bakermans-Kranenburg et al. (1998) note that in studies with small sample sizes, a lack of statistical significance may obscure a theoretically and clinically relevant finding, thus highlighting the need for the inclusion of effect sizes. Therefore, some studies did not achieve a quality score for the size or precision of effect if these were not reported.

Table 3: Quality assessment (Randomised controlled trials)

Study	Focussed issue	Random assignment	Accounted in analysis	Blind	Matched	Equal treatment	Overall quality score
	Size of effect	Precision of treatment effect	Generalisable	Range of outcomes considered	Benefits worth costs		
Hoivik et al. (2015)	*	*	CT	*	-	*	
	*	*	-	*	*		72.7%
Hoffenkamp et al. (2014)	*	*	CT	-	*	*	
	-	*	*	*	*		72.7%
Smith et al. (2013)	*	-	*	-	-	*	
	*	*	*	*	*		72.7%
Spieker et al. (2012)	*	*	-	CT	*	*	
	-	-	-	*	-		54.5%
Moss et al. (2011)	*	*	*	*	*	*	
	*	*	*	-	*		90.9%
Groeneveld et al. (2011)	*	*	*	*	*	*	
	-	-	-	*	-		63.3%
Kalinauskiene et al. (2009)	*	*	*	-	*	*	
	*	*	-	*	*		81.8%
Van Zeijl et al. (2006)	*	*	*	-	*	*	
	-	-	*	*	*		72.7%
Klein Velderman et al. (2006)	*	*	*	*	*	*	
	-	-	-	*	*		72.2%
Stein et al. (2006)	*	*	*	*	*	*	
	*	*	*	-	*		90.9%
Juffer et al. (2005)	*	*	*	*	*	-	
	*	-	-	-	*		72.7%
Bakermans-Kranenburg et al. (1998)	*	*	*	*	*	CT	
	*	*	-	-	*		72.7%

Table 4: Quality assessment (Case controlled studies)

Study	Focussed issue	Appropriate methodology	Cases Recruited appropriately	Controls recruited appropriately	Use of appropriate measures	Accounted for confounding variables	Overall score
	Results	Precision of results	Validity of results	Generalisable	Consistent with previous research		
Cassibba et al. (2014)	*	*	*	*	*	*	
	*	*	*	-	*		90.9%
Stolk et al. (2008)	*	*	*	*	-	-	
	-	-	-	*	*		54.5%

Key: * = yes - = no C/T = cannot tell

Data synthesis

In total, 14 studies were eligible for inclusion. These comprised 12 randomised or quasi-randomised controlled studies, and two case controlled series. Seven studies were undertaken in Netherlands, two in the USA, and one from each of Norway, Canada, the UK, Italy and Lithuania. A summary of studies can be found in Table 1.

Sample Characteristics

The 14 studies featured a total 1,172 caregiver-infant dyads. Fathers were significantly underrepresented amongst the studies; only three studies assessed the use of VFI for improving parental sensitivity in fathers (Hoffenkamp et al., 2014; Smith et al., 2013; Spieker et al., 2012), with the majority examining the relationship between mothers and infants. The populations under investigation varied greatly in their nature: first time mothers (Kalinauskiene et al., 2009), mothers with eating disorders (Stein et al., 2006), mothers with depression (Høivik et al., 2015), mothers with insecure attachment styles (Bakermans-Kranenburg et al., 1998), mothers of children born pre-term (Hoffenkamp et al., 2014), professional caregivers (Groeneveld et al., 2011), foster carers (Spieker et al., 2012), children with externalizing behaviours (Kalinauskiene et al., 2009; Klein Velderman et al., 2006; Stolk et al., 2008; Van Zeijl et al., 2006), children placed in foster care (Spieker et al., 2012) and maltreated children (Moss et al., 2011). The reported mean age of mothers across all studies was 32.07. The mean age of fathers across the studies was 33.85. Infants ranged in age between 3 months and 4 years at the time of intervention.

Overview of VFI Interventions

Intervention length varied across the studies; the mean number of sessions was 5 (range = 3 to 13) and sessions typically lasting between 60 and 90 minutes. Interventions were undertaken by a range of healthcare professionals from a variety of training backgrounds. The majority of the studies developed and used treatment protocols as to how VFI would be utilised within the intervention. However, in one study VFI was used at the discretion of the therapist, which subsequently determined the group to which the parent-infant dyad was allocated (Smith et al., 2013).

The majority of studies did not utilise VFI as the entire basis for the intervention. Instead, most combined VFI with adjunct treatment components based on an examination of literature that indicated adjunctive components to VFI might be useful in maximising outcomes (see below). However, none of the studies utilised a component analysis of the interventions; parental sensitivity was not assessed before and after the VFI/adjunctive component. Some studies (e.g., Bakermans-Kranenburg et al. (1998) completed the VFI component of the intervention prior to the implementation of the adjunctive component of the intervention. In contrast, some studies (e.g., Cassibba et al. (2014) incorporated adjunctive components into the video feedback sessions, rather than in subsequent sessions.

All studies used a strength-based approach to intervention, which typically took the form of the therapist filming interactions between the parent and infant, and then reviewing these in subsequent sessions and basing discussions around examples of sensitive parenting. Whilst none of the studies used teaching methods, some studies did utilise forms of psychoeducation as supplementary adjuncts to VFI. For example, Groeneveld et al. (2011) and Kalinauskiene et al. (2009) utilised written material as part of the intervention to reinforce key concepts relating to sensitivity.

Whilst the primary outcome for this review was the efficacy of VFI on parental sensitivity (and indeed, all studies used parental sensitivity as a primary or secondary outcome), studies varied in their outcome variables. These included the effect of VFI on: child attachment security (Cassibba et al., 2015; Juffer et al., 2005; Kalinauskiene et al., 2009; Moss et al., 2011; Klein Velderman et al., 2006), parental attachment representations/ styles (Cassibba et al., 2015), coercive parenting styles (Smith et al., 2006), parental negative relational schemas (Smith et al., 2013) and reduced mealtime conflict between mothers with eating disorders and their infants (Stein et al., 2006).

All studies utilised a control group. Control interventions varied based on the context in which participants were recruited, but typically featured infrequent visits from a social care worker or infrequent supportive telephone calls. All studies reported that video feedback, discussions, advice or support relating to parental sensitivity did not form part of the control intervention. Two studies used three groups; Klein Velderman et al. (2006) used a control group, VFI, and VFI with discussions of maternal attachment representation and Juffer et al. (2005) utilised a treatment as usual (TAU) group, a group with a personalised parenting book, and a VFI group with the addition of a personalised parenting book.

Results

Effect of VFI on Parental Sensitivity

In total, 13 studies found that VFI significantly improved parental sensitivity post intervention, compared with the control group that did not receive VFI. One study (Groeneveld et al., 2011) failed to find a significant effect of VFI in terms of improving parental sensitivity (p = 0.13). Of the studies that found significant effects, five assessed parental sensitivity at a follow up point after intervention (mode = 6 months); none of these studies demonstrated a significant maintained effect of VFI on parental sensitivity at follow up (Hoivik et al. (2015), p = 0.49; Hoffenkamp et al. (2014), effect not reported; Smith et al. (2013), r =-0.16; Spieker et al. (2012), d = 0.29; Klein Velderman et al. (2006), d = 0.04). A summary of treatment effects and maintained effects can be found in Table 2.

Overall, treatment effects were generally small to moderate (d = 0.4 – 0.65). There were two exceptions to this (Bakermans-Kranenburg et al., 1998; Kalinauskiene et al., 2009), which demonstrated effect sizes of d = .87 and d = .78, respectively. In both studies adjunctive treatment components were utilised; discussions relating to the mothers own attachment representations and brochures relating to sensitive parenting, respectively. Bakermans-Kranenburg et al.'s (1998) study comprised mothers with insecure attachment styles (insecure avoidant or insecure preoccupied). The authors concluded that VFI may be particularly effective for parents with insecure attachment representations. Kalinauskiene et al. (2009) utilised a sample of middle class mothers, whose infants did not meet clinical threshold for externalizing disorders. The authors suggest that VFI may be particularly useful for families where the number of adverse parental stressors and social factors (e.g., lack of family support, poverty) is minimised. Both studies achieved a quality rating of 71.4%, and both studies utilised the gold standard measure for assessing parental sensitivity (Ainsworth's Sensitivity Scales) where raters were blind to the group of the mothers they were assessing. However, both studies lost quality for generalisability of results, due to the homogeneity of their samples.

Interestingly, one other study (Klein Velderman et al., 2006) also added an 'attachment discussion' component to a four session VFI intervention, finding an overall effect size of d = 0.46. However, this was not maintained at follow up (d = 0.04). Of the studies

that assessed improvements in parental sensitivity in fathers (n = 3), effect sizes were moderate (*d* = 0.56 - 0.60).

Whilst not a specific aim of the current review, it seems important to comment upon the relationship between improvements in parental sensitivity and changes in infant attachment style. Four studies assessed the impact of improved parental sensitivity in relation to the infant's attachment style. Whilst Spieker et al. (2012) demonstrated significant improvements in parental sensitivity as a result of VFI (*d* = *0.*41), this improvement did not predict changes in the infant's attachment representation (i.e. insecure to secure). Similarly, Kalinauskiene et al. (2009) found no significant effect of the intervention on child attachment style following the intervention (*p* = 0.99). This pattern was also observed by Klein Velderman et al. (2006) in which there was not a significant effect of VFI on child attachment security at 40 months follow up (*d* = 0.05). However, in contrast Moss et al. (2011) found that improvements in parental sensitivity as a result of VFI did correspond with improved infant attachment security; 37% of infants with disorganised styles of attachment transitioned into secure styles of attachment, as measured by the Strange Situation Procedure (SSP). Furthermore, Juffer et al. (2005) found that infants of mothers receiving VFI with the addition of a personalised book of information relating to sensitive parenting were significantly less likely to be classified as disorganized attached post intervention (*d* = 0.46), and received lower scores on the rating scale for disorganization than children in the control group *(d* = 0.62).

Mediating and Moderating Factors of the Efficacy of VFI

Parental Attachment Representations/Schema

Several studies assessed parental attachment representations as a moderating factor of VFI efficacy; Cassibba et al. (2015) found that mothers with insecure attachment styles benefitted more from VFI compared with mothers with secure attachment representations (*p* = <0.01), supporting Bakermans-Kranenburg et al. (1998) finding that VFI are particularly effective for mothers with insecure attachment representations. The latter study found that mothers with insecure dismissing attachment styles profited more from VFI alone, whereas mothers with insecure preoccupied styles of attachment benefitted more from VFI combined with discussions regarding their own attachment style (*d* = 0.65). Smith et al. (2013) found that mothers with negative relational schema (experiencing child externalizing behaviours as persecutory, hypothesised to be as a

result of one's own early life experiences) was a moderating variable on parent-child coercive interactions, in that positive relational schema predicted reduced coercive interactions (r = 0.28, *p* = 0.05). However, all three studies had modest sample sizes (n = 32 and n = 30, n = 79, respectively).

Parental Mental Health

Høivik et al. (2015) found that VFI was particularly effective for mothers that were experiencing mild to moderate depression (*p* = < 0.01), assessed using the Beck Depression Inventory (BDI). However, these effects were only demonstrated post intervention and were no longer observed at six month follow up (*p* = 0.49). Hoffenkamp et al. (2014) found that mothers who were traumatised from a premature birth of their infant benefitted significantly from VFI, compared with mothers who found the experience less traumatic (*d* = 0.80 – 1.04). In a study of mothers with eating disorders, Stein et al. (2006) demonstrated reductions in mealtime conflicts for mothers following VFI (*p* = < 0.01). However, there was not a significant reduction in inappropriate verbal responses to infants during mealtimes (*p* = 0.053).

Maternal Education

Bakermans-Kranenburg et al. (1998) investigated the use of VFI for mothers from middle to lower classes with a limited number of years education (range = 8 – 14 years), finding that VFI was effective in improving parental sensitivity in this group (*d* = 0.87). However, the authors did not use a comparison group of mothers with years of education beyond this. This lack of comparison does not allow for differences between social groups to be inferred.

Therapeutic Alliance

Stolk et al. (2008) found that improvements in parental sensitivity following VFI were significantly correlated with a strong working alliance between the therapist and the parent (r = 0.29), as measured by an idiosyncratic measure of working alliance. This might suggest that a strong working relationship with the therapist may be an important factor in predicting changes in sensitive parenting. However, whilst therapeutic alliance was reported by both therapists and mothers, only the therapist's ratings were included in the analysis, due to minimal variation in mother ratings (90% of the mothers described the contact with the intervener as 'pleasant' or 'very pleasant'). This raises

the potential for measurement bias in this finding, and limits the conclusions that can be drawn regarding therapeutic alliance as a predictor variable of sensitive parenting

Discussion

This review assessed the efficacy of Video Feedback Interventions (VFI) for improving parental sensitivity. In total 14 studies met inclusion criteria, of which 13 demonstrated significant improvements in parental sensitivity following the intervention, compared with a control group. However, none of the five studies that assessed parental sensitivity at follow up demonstrated a significant effect at follow up (mode 6 months). In addition, five studies specifically assessed the relationship between improved parental sensitivity and subsequent effects on infant attachment security; three of these demonstrated significant improvements in attachment security, compared with two that did not. Based upon these findings, it is possible to conclude overall that VFI are efficacious in improving parental sensitivity in the short term, but that these improvements diminish with time. Furthermore, there is mixed evidence as to whether improvements in parental sensitivity predict subsequent infant attachment classification.

One of the aims of this review was to examine the 'less-is-more' or 'short but powerful' (Fukkink, 2008) hypothesis of VFI efficacy, as to whether interventions employing fewer sessions are more beneficial. However, a finding of the current review is that the majority of interventions typically used fewer sessions (mean = 5), which would suggest that this hypothesis seems to underpin much of the research that is currently undertaken into the efficacy of VFI. This prevents the 'short but powerful' hypothesis from being tested. Only one study (Stein et al., 2006) utilised a more than usual number of sessions (13) when assessing whether VFI could be used effectively to improve parental sensitivity in mothers with eating disorders, which found significant improvements in maternal sensitivity. Historically, psychological interventions employed with people with eating disorders tend to be longer term (Wilson, Grilo, & Vitousek, 2007), so the increase in the number of sessions may have been reflective of the need to extend interventions for use with an eating disorder population. In clinical practice, one might hypothesise that for complex parental psychopathology accompanying

difficulties in the attachment relationship, the number of VFI sessions may need to be increased to achieve significant outcomes. Having said this, Hoivik et al. (2015) found that mothers with mild to moderate depression benefitted from a short number of video feedback intervention. This highlights the need for further research examining the role of parental mental health as a moderating variable of parental sensitivity.

The methodological and report quality employed in the reviewed studies was somewhat varied. For example, Smith et al., (2013) allocated participants to groups at the discretion of the therapist, as to whether the therapist believed that VFI would be a useful component in the intervention. Whilst results from this study found significant improvements in parental sensitivity, these results must be interpreted with caution given the lack of rigour associated with allocation of groups. The three studies that were appraised as having quality of 90.9% all demonstrated significant improvements in parental sensitivity post intervention (Cassibba et al., 2015: p = 0.02; Moss et al., 2011: d = 0.47; Stein et al., 2006: p = 0.007), but none assessed maintained parental sensitivity at follow up. Therefore, it is reasonable to conclude that there is a lack of high quality research that examines the efficacy of VFI in improving long term parental sensitivity. Further to this, and despite the lack of high quality studies assessing the long term impact of VFI, it would also be reasonable to conclude that based on current evidence, VFI may not be efficacious in terms of maintaining sensitive parenting practices.

What might account for diminishing sensitive parenting after the conclusion of intervention? One important variable may be social context and a stressed home environment. For example, Van Zeijl et al. (2006) utilised children with a high level of externalising behaviours. Children with externalizing problems are likely to elicit disciplinarian and coercive styles of parenting (Amato & Fowler, 2002; Bor & Sanders, 2004), suggesting that strained family relationships may limit the ability of some parents to consistently parent in a sensitive manner. Furthermore, Spieker et al. (2012) investigated parental sensitivity in foster carers. Foster placement breakdowns are common (Rostill-Brookes, Larkin, Toms, & Churchman, 2010; Sallnäs, Vinnerljung, & Kyhle Westermark, 2004) and indeed many of the young participants within the study changed placement during this study. This may have limited foster carers' abilities to engage in an intervention without a consistent infant in their care. These two examples might lead one to hypothesise that parenting in a sensitive way may be challenging if there are a range of systemic or environmental factors that impede progress. Indeed, Fukkink (2008) suggests that video feedback may be more successful in alleviating

parental stress that is specifically related to raising issues (i.e., at parent–child level), but is not tailored to relieve the burden of other significant problems at parent level or social level (e.g., parental psychopathology or conditions of poverty). However, given that the two studies that demonstrated the greatest treatment effects used samples in which other difficulties were present (mothers with insecure attachment representations (Bakermans-Kranenburg et al., 1998) and first time low sensitive mothers with infants with externalising behaviours (Kalinauskiene et al., 2009) this hypothesis might not be fully supported. Future research might design studies of VFI efficacy that use multiple comparison groups (e.g., psychologically healthy mothers, compared with mothers with a high degree of psychopathology) to ascertain whether problems and difficulties that are greater than parent-child relationship may limit the effectiveness of VFI.

Interestingly, the two studies that found the largest effect sizes for improving parental sensitivity used adjunctive components to VFI. At first sight, one might hypothesise that having adjunctive elements to VFI might be beneficial. However, Bakermans-Kranenburg et al. (1998) used three comparison groups (control, VFI, VFI + discussions of mother's attachment representation), finding no difference between the two groups using VFI, which may be indicative of no additional benefit when incorporating discussions relating to maternal attachment representations. Given that many of studies added adjunctive components to VFI, it would be important for future research to undertake specific intervention component analysis to determine if VFI is sufficient in itself to improve parental sensitivity.

However, Bakermans-Kranenburg et al. (1998) found that mothers with insecure preoccupied attachment styles appeared to benefit significantly from having the opportunity to discuss their own attachment experiences. This compared with mothers with insecure avoidant attachment representations who benefitted more from VFI alone. This would suggest that parental attachment representations may be a mediating/and or moderating factor in sensitive parenting, and this is a relationship that future research should look to examine. The authors note that insecure avoidant mothers may profit from interventions with written material and video feedback because of the focus on observerable interactions and a tendency to want to avoid discussing emotional components of childhood, compared with mothers with insecure preoccupied styles of attachment who may be more willing to discuss and link their own childhood experiences to their parenting style. If it were the case that different parental attachment classifications may be suited to different forms of VFI to improve sensitive parenting, this has implications for clinical practice and would suggest the need for

identifying parental attachment style during assessment so that interventions could be tailored accordingly.

Of the reviewed studies, just three recruited fathers as part of the study. This would suggest a significant gap in the current literature regarding parental sensitivity. Given that the proportion of stay-at-home fathers has increased significantly in recent years, where their reported role is to take care of the family (Chesley, 2011), future research evaluating the efficacy of VFI would benefit from specifically evaluating the use of VFI for fathers. Encouragingly, research in this area is emerging; Lawrence, Davies, and Ramchandani (2013) undertook a pilot study focussing specifically on improving parental sensitivity in fathers, which demonstrated positive process evaluation outcomes. Future research should look to build upon these findings to determine if 'paternal sensitivity' can be improved through the use of VFI.

Limitations

Despite the systematic search process employed in the current review, the search results and references of identified papers were not independently screened by another researcher; this has the potential for studies that may have been eligible for inclusion to be excluded from analysis. Again, the method for assessing the quality of the studies was undertaken by one researcher, which introduces the possibility of a threat to the validity of the quality appraisal. Further to this, the current review excluded unpublished literature and single case designs, which has the potential to contribute to publication bias. As a result, the findings of the current review should be interpreted with this in mind.

Conclusion and Implications

Based on the current review, brief, short term video feedback interventions appear to be an efficacious intervention to improve parental sensitivity post intervention. However, these effects do not seem to be maintained over time, suggesting that VFI may not be an efficacious intervention for improving *and* sustaining sensitive parental

practices. Studies assessing the efficacy of VFI in the current review were deemed to be of mixed quality. The majority of studies used adjunctive treatment components in addition to VFI, but no studies featured a component analysis of the intervention, which presents problems when assessing the efficacy of VFI in their purest form. Studies that demonstrated the greatest improvements in parental sensitivity utilised samples that were small in number, and featured homogenous samples. Furthermore, the findings of this review would indicate that the groups that seem to benefit most from VFI are mothers with insecure attachment styles and mothers who are deemed to significantly lack sensitivity in their parenting, compared to mothers who may already be relatively sensitive in their parenting style. Future research assessing VFI efficacy should look to employ component analyses of interventions, to determine how effective video feedback can be as a standalone intervention. Furthermore, research should further investigate improving parental sensitivity in fathers, as there appears to be a distinct lack of empirical literature in this area.

Given that the majority of the studies in this review utilised adjunctive treatment components alongside video feedback, it may be useful for individual services to tailor the VFI to the individual service user of family. For example, if a mother presents to a service with who herself has an insecure-preoccupied attachment representation, it might be most useful to employ a VFI that also features verbal discussions with the therapist regarding her early life experiences. Given also that the effects of VFI seem to diminish with time, services may find it useful to employ 'booster sessions' on sensitive parenting, to assist with the retention of sensitive parenting practices. It might also be suggested that this should be a direction for future research, to determine how the effects of VFI can be best maintained over time.

It would also be important for services to recognise that social factors (e.g., poverty, lack of family support) or stressors within the family (e.g., a high level of child externalising behaviour) may reduce the effectiveness of VFI. This would be of particular relevance for services that work with children and families within the welfare system and socially disadvantaged communities. It might be hypothesised that VFI are useful clinical intervention to enable parents to become more sensitive in their parenting but that daily hassles and stressors are likely to interfere with long term behaviour change in terms of parenting practices. Accordingly, it would be important for the service undertaking a VFI to work closely and collaboratively with other agencies (e.g., social care, housing etc.), to minimise the stressors placed on the family.

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Service Improvement Project paper

A comparison and exploration of burnout in clinicians working with Offenders with Personality Disorders: a Service Improvement Project

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Literature Review

High levels of occupational stress are associated with increased risk of professional burnout (Perseius, Kaver, Ekdahl, Asberg, & Samuelsson, 2007). 'Burnout' was first defined by Maslach as a syndrome of emotional exhaustion, lack of personal accomplishment, and the development of cynicism (or 'depersonalisation') that can occur among individuals that do 'people-work' (Maslach & Jackson, 1981). Burnout should be distinguished conceptually from occupational stress; the latter is considered a transient and temporary phase of increased work related stress. In contrast, burnout refers to prolonged occupational stress, where maladaptive beliefs and attitudes to one's work often develop (Langan-Fox & Cooper, 2011).

Mental health professionals have higher levels of burnout compared with other groups who work with people (e.g., teachers) (Crawford, Adedeji, Price, & Rutter, 2010; Fothergill, Edwards, & Burnard, 2004), thus leading to difficulties with retaining staff in mental health services (Evans et al., 2006). Burnout is particularly common amongst those working with clients with Personality Disorders (PD) (Perseius et al., 2007). It has been proposed that working with 'difficult to treat' clients (such as those with a PD diagnosis), can foster reduced efficacy, self-esteem and exhaustion (Allen, 1997). Delivering a high quality service is dependent on retaining a skilled workforce (Crawford et al., 2010), and it is therefore important to minimise the risk burnout in staff working with clients with PD.

Whilst it is established that clinicians working with clients with PD are at increased risk of burnout, what is less evident in the literature is an exploration of *how* burnout is managed at a service level (Crawford et al., 2010), and also what personal resiliencies, coping resources and strategies are required to minimise burnout. This service improvement project aimed to answer some of these questions. Firstly, levels of burnout within a specialist forensic PD service are examined and compared by means of descriptive statistics with levels of burnout from a recent piece of research carried out within a similar team. Subsequently, factors that may increase the prevalence of burnout within a forensic PD service are examined, and practical suggestions are gathered from clinicians as to how the risk of burnout can be minimised within the service.

Service Information

The participating service was a specialist community-based forensic PD service. The service provides assessment, triage and intervention in the community for service users with a diagnosis of PD and a forensic history who pose a high risk of harm to others. The service also offers case management and consultation to other agencies. The service employs between 15 and 20 clinicians represented by a range of professional backgrounds (Nursing, Occupational Therapy, Clinical Psychology, Psychiatry etc.). The service offers placements and employment to student and trainee clinicians, and unqualified clinicians (e.g., assistant psychologists).

The aims for the project were generated at team meetings. It was suggested that high levels of occupational stress may be prevalent amongst clinicians, which may have been compounded by an ongoing service redesign. It was thought that a project assessing the prevalence of burnout and ways to reduce the risk of burnout would be useful. A formal proposal was discussed with the team who felt it was an acceptable project.

More generally, the service is continually expanding in terms of staffing: this project aimed to help the service think about how to support new staff or current staff members who may experience increasing burnout. It was hoped that the project would contribute towards general staff well-being and therefore staff retention and avoidance of sickness absence. This could be seen as aiding the retention of expertise and experience within the service, thus contributing to a high quality service and therefore a positive experience for service users.

Aims and objectives

The identified aims for the project were:

1. To compare levels of burnout in clinicians working in a specialist forensic PD service with levels of burnout found in previous comparable research (Crawford et al., 2010) for illustrative purposes, and also to ascertain levels of ‘high’ burnout within the service in comparison to the published norms.

2. To explore how burnout may arise within a forensic PD service, and the factors that may contribute to experiences of burnout.

3. To identify how the risk of burnout could be minimised or reduced within the service.

Method

Design, Sampling and Procedure

A mixed methods design was employed. Clinicians that met inclusion criteria (n=16) were given questionnaire packs in a team meeting. Questionnaire packs were left for those who were absent from the meeting. One of the research team (AN) was also an employee of the service, and did not complete a questionnaire pack to avoid a conflict of interest. A personal identification number was assigned to each participant, to ensure anonymity. Participants completed the questionnaire packs and returned them to the lead researcher (RC) by post.

The inclusion criteria for participation was:

i. A minimum of six months working within the service.
ii. Clinicians currently holding a clinical caseload.

It was felt necessary to exclude clinicians with less than six months experience to reduce the possibility that clinicians had simply not had 'enough time' to become burnt-out or that burnout was an effect of previous employment. Including staff that worked directly with service users made the data more comparable with Crawford et al.'s research which assessed burnout in clinicians, as opposed to administrative support staff.

It was explained in the study information sheet that if participants had significant levels of burnout, this would be discussed with them in the first instance as to how this might be resolved (e.g., referral to occupation health, discussion with line manager etc).

Measures

- **The Maslach Burnout Inventory (Maslach & Jackson, 1981) (MBI)**

The MBI is a standardised, 22 item pen-and-paper questionnaire and is a widely used measure of burnout. The MBI has three subscales (Emotional Exhaustion, Depersonalization Reduced Personal Accomplishment) and possesses normed data with thresholds (>21, >8, <28, respectively) which represent clinically significant burnout. The MBI has been shown to have good internal consistency and test-retest reliability (Maslach & Jackson, 1981), with support having been found for the MBI's three factor structure (Green & Walkey, 1988).

- **Therapeutic Qualities Schedule Part B (TQSPB)**

An idiosyncratic clinician devised questionnaire designed for the current study (Appendix D) that asked about strategies that clinicians found useful to reduce stress and burnout and suggestions for how to promote well-being amongst clinicians. This was developed by RC and reviewed by AN to ensure that questions reflected the aims of the project.

Demographic and employment information was collected (see Table 1).

Table 1: Demographic and Employment Information

	Mean (Standard Deviation)	**Range**
Length of Employment (months)	37.22 (29.12)	6 – 78
Contracted hours (per week)	26.86 (11.53)	11.25 – 37.5
Direct hours with Service Users (hours per week)	3.22 (2.20)	0.5 – 7.5
Indirect hours with Service Users (hours per week)	17.33 (8.92)	5.0 – 30.0
Supervision per month (hours)	1.47 (1.08)	0.5 – 4.0
Reflective practice per month (hours)	0.94 (0.17)	0.5 – 1.0

The responses from the TQSPB were not detailed enough to allow for a formal qualitative analysis. As a result, a focus group was subsequently utilised. All members of the clinical team were sent an email asking them to self-select for the focus group. The interview schedule (Appendix E) was based on the comments received on the TQSPB, to enable a richer and fuller discussion of ideas that had been suggested.

Analyses

MBI

The mean and standard deviation of each of the three MBI subscales was compared to those found in Crawford et al. (2010) to give an illustrative comparison of burnout. The number of participants that met the threshold for clinically significant 'high' burnout with regards to the published norms was ascertained.

Therapeutic Qualities Schedule Part B

Formal analysis of the data was not undertaken due to the limited responses from participants.

Focus Group

Data from the focus group was analysed using Thematic Analysis, in accordance with the method described by Braun and Clarke (2006). The focus group transcript was coded by RC. RC and AN met to review codes, rename and define the themes to produce the final thematic maps. Themes were presented and validated by the clinicians at a team meeting; minor changes (e.g., the wording of some themes) were made.

The qualitative analysis adopted a theoretical and semantic stance to the data, using a realist epistemology. The thematic analysis was driven from clear objectives and aims relating to burnout, and thus the data were coded in relation to these aims. The authors assumed a realist epistemology with regards to the data, in that the words and language used by participants reflected their experiences (Braun & Clarke, 2006). The authors felt that adopting these positions would allow for a more practical and clinically useful analysis of the data in that suggestions made by clinicians of how to minimise the risk of burnout were accepted as suggestions at face value, as opposed to

searching for meanings underlying those suggestions that would typically be associated with a more constructionist perspective.

Results

Of the 16 eligible participants, nine (56%) completed and returned the questionnaire packs. Six clinicians participated in the subsequent focus group.

Separate thematic maps were produced for: 'Perpetuation of the risk of burnout' (Figure 1) and 'Minimisation of the risk burnout' (Figure 2).

Levels of Burnout

Mean levels of emotional exhaustion, depersonalization and personal accomplishment from the MBI are presented alongside those from the Crawford et al. study in Table 2. Levels of burnout were elevated across all three subscales of the MBI, compared with the Crawford et al. study. In the current sample, four participants (28.6%) met the threshold for high Emotional Exhaustion, 1 (7.1%) for Depersonalization and 2 (14.3%) for low sense of Personal Accomplishment. However, the only subscale in which the mean score of the current sample exceeded clinically significant 'high' burnout (as compared to the normative data for the MBI) was Emotional Exhaustion. Of note, there was significant variation within the sample in reported Emotional Exhaustion (SD = 8.8).

Table 2: A comparison of levels of burnout

Study	Sample	Emotional Exhaustion* (>21***)	Depersonalization* (>8)	Personal Accomplishment** (<28)
Current project	9 clinicians in a specialist Forensic PD	23.7 (8.8)	5.1 (2.9)	30.33 (5.2)

	service in England			
Crawford et al. (2010)	87 clinicians working in specialist community PD services in England	17.7 (9.7)	4.4 (3.8)	36.6 (5.8)

* Higher scores denote a higher sense of Emotional Exhaustion and Depersonalization

** Lower scores denotes a lower sense Personal Accomplishment

*** 'High' threshold

Perpetuation of the risk of burnout

Tables of themes and illustrative quotations of can be found in Appendix G. Participant's names have been replaced with identification letters. The Jefferson Transcription System (Jefferson, 2004) was utilised; capital letters are used to denote spoken emphasis, and (value) denotes a pause in speech.

Two overarching themes were identified, relating to factors that perpetuated burnout within the forensic PD service. These were "*the grim reality of the work we do"* and team cultures.

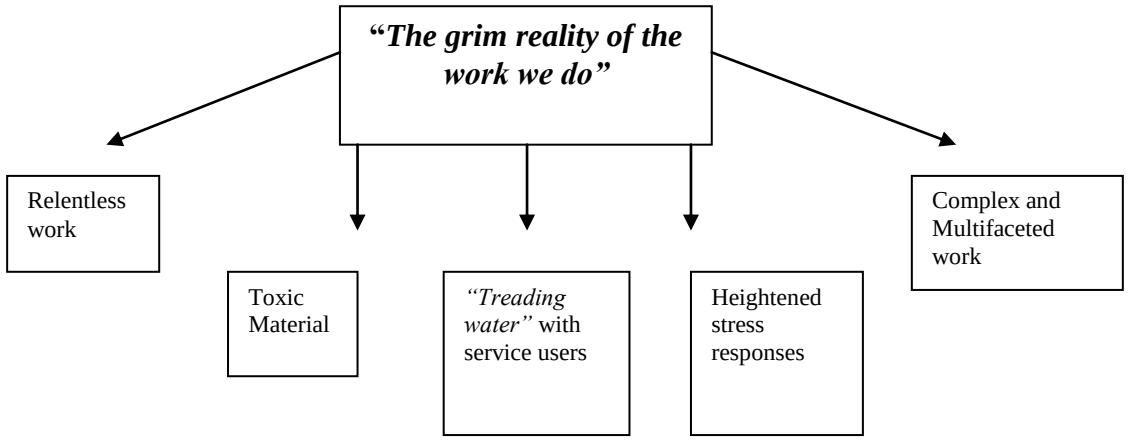

Figure 1: Thematic maps of factors that perpetuate burnout

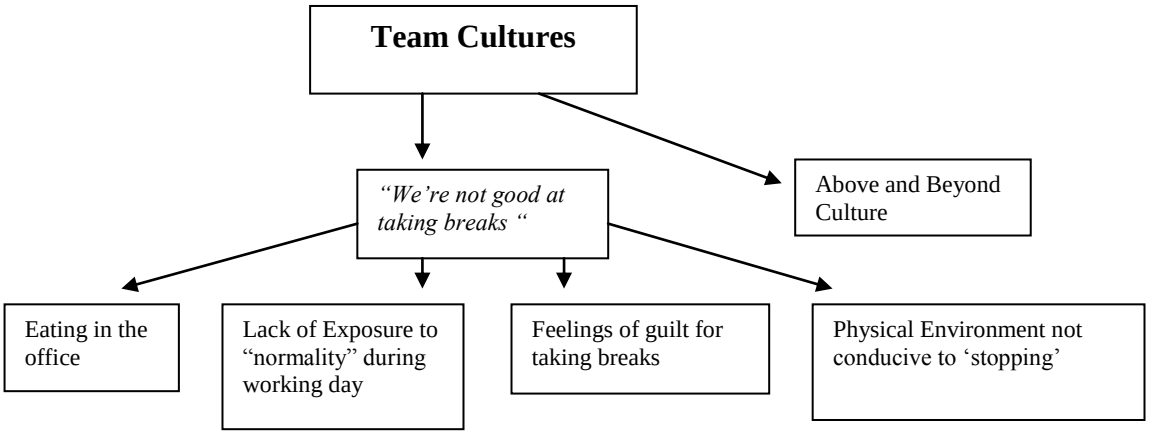

Figure 1: Thematic maps of factors that perpetuate burnout (continued)

1. The grim reality of the work we do

Interviewees highlighted that the nature of forensic PD work has a distinct "grim reality" to it, which comprised the superordinate themes in Figure 1. Interviewees described the complex and multifaceted work that they engage in on a daily basis, which can be a source of stress. In addition, the work can be complicated by the existential and philosophical questions that are raised when working with offenders with PD. This may be an example of added dimension to working with offenders with PD: the nature of the work means that clinicians have to be *"exposed to fairly toxic material",* and this can be a source of internal unrest which has the potential to contribute to subsequent burnout.

The aforementioned idea of being confronted by *"toxic material*" on a daily basis was recurring. "*Toxic material*" might take the form of reading information regarding the offender's life experience, the details of an offender's index offence, or perhaps being confronted with offenders whose presentations or interaction styles may be a source of discomfort for clinicians. Therefore, the combination of daily working offenders with PD, who may have committed "*perverse"* offences, may be source of stress which has the potential to lead to emotional exhaustion.

Also present was the idea that there can be a lack of exposure to normality during the course of the working day for clinicians. It was suggested that this, combined with toxic material, holding responsibility for managing high risk offenders, and the unrelenting

workload that clinicians had to endure was likely to lead to stress responses being placed on "*high alert"* throughout the course of the day, and this might seemingly increase the risk of burnout. It was also suggested that at times it could feel as though one is 'treading water' with service users, which has the potential to create a sense of burnout. .

2. Team Cultures

Interviewees suggested that as a collective team, clinicians were *"not very good at taking breaks*", and that this could be a contributing factor to burnout. Furthermore, it was suggested that there was a team culture of not using breaks to refresh oneself, instead opting to eat at their desks or in their offices. It was highlighted that one contributing factor to not taking breaks might be feelings of guilt that clinicians experience for taking breaks, despite recognising that it was in their best interests to do so. By not taking regular breaks and leaving the toxic environment, clinicians may not allow for the aforementioned exposure to normality in a working day, and thus increase the risk of burnout. Interestingly, it was suggested that the physical design of the building was not conducive to clinicians stopping work and taking breaks, which was perceived as a key perpetuating factor for the risk of burnout.

Interviewees talked about a culture within the team of *"doing more than we should"* (D). It would seem that there may be the temptation for team members to go above and beyond, by working later in order to complete their work-related tasks. It was suggested that this may be because of personal expectations of completing work promptly and to a high standard, or perhaps because of the perceived expectations placed on clinicians by management and service commissioners.

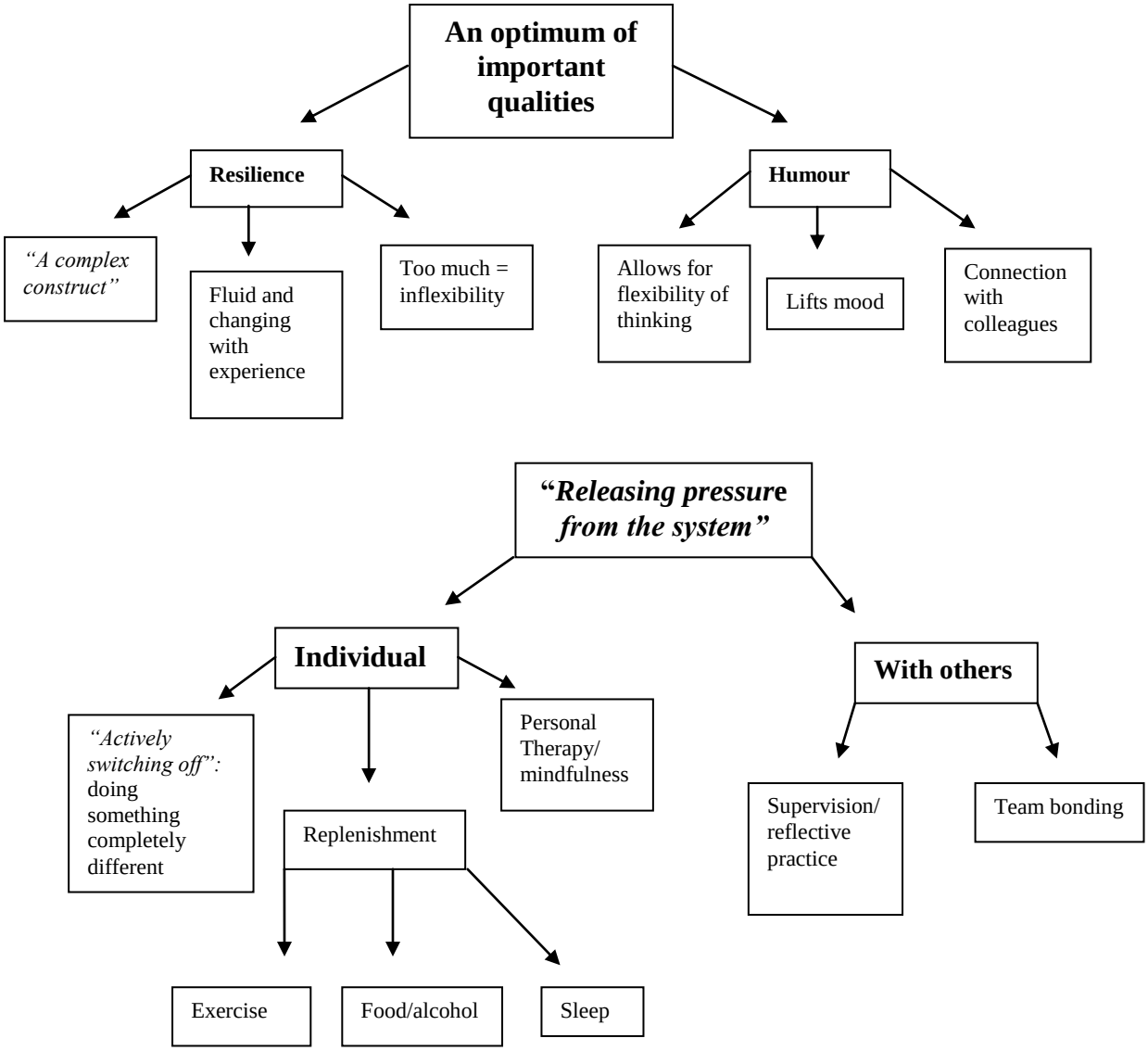

Figure 2: Thematic maps of the minimisation of the risk of burnout

Minimisation of the risk of burnout

1. **An optimum amount of important qualities**

Two prominent qualities emerged that were seen as important in reducing burnout when working with offenders with PD: resilience and humour. However, it was not suggested that having more of these qualities was preferable; instead, it was proposed that there is an 'optimum amount' of these desirable qualities.

Interviewees suggested that resilience was a complex and fluid construct that developed with experience, as opposed to a static concept across time. Interestingly, participants felt that too much resilience (i.e., not being sensitive enough to the type of work or the material being encountered during one's work), would mean that clinicians may become too inflexible or rigid in their thinking. It might be suggested that striving to be too robust and emotionally resilient may be counterproductive in this occupational field.

Another quality that was seen as important in optimum amounts was humour; much like resilience, humour was seen as important in that it allowed for flexibility in thinking. More generally, humour was seen to lift one's mood and enabled colleagues to 'connect' with one another on a personal level, which was seen as protective against burnout. Again, interviewees were keen to highlight that too much expressed humour had the potential to lead to derogatory attitudes towards offenders with PD, which was viewed as unprofessional and unhelpful. In turn, it was suggested that too much humour would allow for emotional detachment from the nature of the work, with depersonalization from offenders with PD or cynicism towards one's work being potential outcomes of this.

2. Releasing pressure from the system

A second distinctive theme that arose was the idea of 'releasing pressure from the system'; the idea that when stress rises (which it inevitably will due to the *"toxic"* environment), participants need to release this pressure in some way. This was seen to be achieved in one of two ways; firstly, by using others as source of support, and also on an individual basis by actively *"switching off"* and participating in activities or hobbies that was seen as completely different from work.

One common theme seemed to be the idea of replenishment, or *"putting something back into the system".* This was achieved in one of three ways; sleeping, eating or drinking and exercise. Furthermore, interviewees suggested that personal therapy, or mindfulness meditations may be beneficial for reducing the impact of stress and burnout. Interviewees also suggested that making use of supervision and/or reflective practice was beneficial to reducing stress and burnout. Team away days and team lunches, which presumably would foster the cohesiveness within the team, were

suggested to be useful in minimising the risk of burnout. Finally, it seemed important to participants that senior level management should also recognise that good practice occurs within the team, which would lead to a sense of well-being and potentially an increased sense of personal accomplishment.

Discussion

The results indicate that levels of burnout in a forensic PD service appear to be higher than in previous research in generic PD services with mean scores across all three subscales of the MBI demonstrating elevated levels of burnout compared with Crawford et al., (2010). The current sample's mean score on the Emotional Exhaustion subscale of the MBI exceeded the threshold for 'high' burnout, when compared with the normative data for the MBI. . Qualitative findings identify how burnout may be maintained within a forensic PD service; the environment and work can often be "*toxic",* and contributing factors such as complex and risky cases, at times a lack of improved outcomes with offenders with PD, and not taking regular breaks may contribute to elevated levels of burnout. Strategies for the way in which the risk of burnout could be minimised, which included ensuring that breaks are taken, and developing one's own strategies for *"releasing pressure"* when stress responses were heightened, were also identified.

One factor that may account for increased levels of burnout could be the added complexity of working with *offenders* with PD; Crawford et al.'s (2010) research was undertaken with clinicians from generic PD services, where it is possible that risk and the complexity of material may not be as pronounced as with forensic services. This idea of added complexity may be supported by the qualitative findings of the project, which described the *"grim reality"* of forensic PD work, with some of the themes seeming to be specific to forensic settings (e.*g. "toxic material"),* which might not necessarily be observed in generic PD services. However, some of the themes found in this project may not be specific to forensic PD services, as a lack of personal accomplishment and feelings of being 'stuck' when working with service users with PD is commonplace in generic PD services (Perseius et al., 2007). To ascertain whether there is an added 'forensic' aspect to working with service users with PD, future research might look to compare cross-sectional levels of burnout between different

groups, for example, by comparing a team of community forensic PD clinicians with a team of community PD clinicians.

Nearly half of the participants in the current study reported 'high' levels of Emotional Exhaustion on the MBI. It is worth noting that at the time the current project was undertaken, there was a significant service redesign taking place; it may be that the elevated levels of emotional exhaustion found in this study reflect an unsettled period within the service. There is literature to suggest that NHS service redesigns place excessive demands and can be a source of stress for clinicians (Langan-Fox & Cooper, 2011; Locock, 2003), and clinicians may be at risk of disengagement, emotional exhaustion and a lowered sense of personal effectiveness (Loretto et al., 2005). This explanation might account for increased levels of emotional exhaustion, as clinicians may have been feeling despondent as a result of the service redesign. Indeed, this idea was supported by data from the focus group (E: *"there is this redesign going on and people are feeling devalued and downright furious").*

Reduced feelings of personal accomplishment were reported by the current sample compared with the Crawford et al. study. One possible explanation for this might be the lack of direct time spent with service users. On average, clinicians in the current study spent around two and a half hours per week with service users. Unfortunately, data from direct contact time with service users from the Crawford et al. (2010) study was not collected, so direct comparisons of this cannot be made. Whilst this idea would be contrary to previous findings that both reduced direct contact with patients, and reduced emotionally charged encounters with patients is correlated with lower levels of stress and burnout (Cronin-Stubbs & Brophy, 1985; Langan-Fox & Cooper, 2011; McVicar, 2003), it must be held in mind that these findings often come from the nursing and medical literature. Therefore, the idea that a lower level of direct patient contact may predict a lower sense of personal accomplishment in clinicians working with offenders with PD is a hypothesis that requires further attention in future research.

More generally, the higher levels of burnout demonstrated in the current service may be reflective of the idea that clinicians are more *aware* of the impact that their work can have, as opposed to being more burned out; the service utilises frequent reflective practice (mean = 0.94 (SD = 0.17)) and supervision (1.47 (1.08)), suggesting that there is opportunity for reflecting on the emotional impact of working with offenders with PD. Potentially, what appears to be elevated burnout as measured by the MBI, may in fact

be a reflection of the insight clinicians have with regards to their own emotional experiences regarding their work.

The main themes that emerged in terms of factors that increase the likelihood of burnout related to the toxic environment and team cultures, specifically going 'above and beyond' and not taking time for breaks which would seem to allow from a release from the toxic environment. Psychological detachment, or 'switching off', from work is important in retaining mental well-being; a wealth of literature in the field of occupational psychology suggests that individuals who are able to detach from work are generally more satisfied at work and experience fewer symptoms of psychological strain (Sonnentag, 2012; Sonnentag, Kuttler, & Fritz, 2010). This idea of *"actively switching off"* was found to be helpful by interviewees. Research has demonstrated that increased workload is negatively correlated with psychological detachment (Sonnentag & Bayer, 2005), suggesting that the higher volume of one's work, the more difficult it may be to detach from thoughts and emotions that are evoked by such work, which is likely to increase the risk of burnout. It may be useful for service managers to ensure that workload capacity is managed well within the team.

Limitations

The quantative results of this project were based on a sample of nine clinicians, and so the generalisability of results to the wider team is somewhat limited. Having said this, the demographic information that was collected would suggest that variables such as length of service and number of contracted hours was varied, and diversity seemed to be well represented within the sample. Additionally, the majority of clinicians that participated in the focus group were psychologists, which again limits the generalisability of findings to the wider team. It might be that some clinicians did not opt to take part in the focus group, as they may have felt uncomfortable with discussing their personal views on a sensitive topic in front of others. To address this issue, future research could employ purposeful sampling, or perhaps offer individual or telephone interviews.

Although levels of burnout seem to be elevated, there are methodological limitations associated with the MBI as an instrument to measure burnout: Morse, Salyers, Rollins, Monroe-DeVita, and Pfahler (2012) note that the cut-off scores for "high" burnout (as

indicated by the MBI) in mental health workers are relatively low compared to other occupational groups, and that empirical validation of the cut-points on the MBI is somewhat lacking. Therefore, findings should be taken with caution, as the relatively low cut-off scores for "high" burnout in mental health workers may inflate the prevalence of burnout. However, there did seem to be a consensus from focus group participants that levels of burnout within the team might be high, and this was supported from the themes that emerged in the focus group.

Practical Implications

There is a body of evidence showing that burnout reduction programmes can be an effective way to reduce burnout in mental health staff, which may include cognitive behavioural therapy for stress reduction, assertiveness training, or communication training for supervisors (Morse et al. (2012); Salyers et al. (2011); Paris and Hoge (2010). However, very few interventions have been evaluated, and those that have often have methodological weaknesses in terms of their design (e.g., a lack of gold-standard randomised controlled trials). Many may also be expensive at a time of reduced financial resources within the NHS. In addition, much of the evidence is taken from burnout management programmes outside of the mental health field (see Morse et al. (2012) for a full review). Therefore, it was thought that an intervention of this type would not be indicated, particularly given the current protective measures in place to help reduce burnout within the current service, such as regular reflective practice sessions. The team are considering introducing regular shared lunches, which was indicated by the qualitative findings, both in terms of *"doing something completely different [to working]"* and *"replenishment"*.

The results of the current project were presented to the service. The team felt that the themes were appropriate and reflective of their experiences. Interestingly, clinicians were unsurprised that levels of burnout seemed to be elevated compared with previous research, and attributed this partly to the themes identified within the focus group and also identified the service redesign as a significant factor. It was felt that one useful way to use the project's findings would be to produce a leaflet which acknowledges that burnout may be an issue in forensic PD services, how it may arise, and how it can be minimised (see Appendix F). The leaflet is to be issued to all new employees within the

service (once agreed by the relevant NHS trust), and incorporates feedback obtained from clinicians during a team meeting.

Since the time of data collection, a weekly mindfulness is now offered in group format within the service setting.

A summary of the findings of the project will be prepared for senior management, to make them aware of the current demand on clinicians, and also of the potential impact of service redesign. At the time of writing, a report is being prepared which will be presented to the service senior management, alongside the field supervisor and team manager.

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Main Research paper

Early life Victimisation and Compliance in People with Autism Spectrum Disorders (ASD)

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This journal was chosen based on the journal's emphasis quantative research studies that examine issues relating to well-being in people with Autism.

Introduction

Compliance is defined as the*" tendency of individuals to carry out requests or instructions, for some immediate gain*" (Gudjonsson, 1989). To be 'compliant' is to be aware that one's thoughts or behaviours are being manipulated but, in contrast to suggestibility, there does not need to be personal acceptance or agreement with the influence (Gudjonsson & Sigurdsson, 2003). Compliance can be measured in two ways; via self-reports methods (such as the Gudjonsson Compliance Scale (GCS) or by using experimental methods and behavioural observations (Gudjonsson, Sigurdsson, Brynjólfsdóttir, & Hreinsdóttir, 2002). Using self-report measures has its shortcomings: conceptually, the GCS measures compliance globally, rather than in response to a specific situation. This might be considered problematic, as people may be more or less compliant in different situations, based on who they are with and what is being asked of them (Gudjonsson, Sigurdsson, Bragason, Einarsson, & Valdimarsdottir, 2004).

A range of factors have been shown to predict increased compliance in typically developing (TD) people: low self-esteem, anxiety, paranoid thinking (Gudjonsson et al., 2002), fear of negative evaluation (Gudjonsson, 1988), and victimisation and social ostracism (Carter-Sowell, Chen, & Williams, 2008). A tendency to be overly compliant can have negative implications across different domains including engaging in criminal behaviours due to pressure or coercion by peers (Gudjonsson & Sigurdsson, 2004), underage drinking due to a higher sensitivity for peer approval (Teunissen et al., 2012) and making false confessions when under interrogative questioning (Gudjonsson & Mackeith, 1990). This suggests that a range of psychological constructs may render one more likely to comply with unreasonable, illegitimate or illegal requests.

The potential relationship between victimisation and compliance is of particular interest to the current study. The Need-threat model (Williams, 2009) attempts to explain the link between victimisation and compliance; individuals who are bullied or ostracised are at increased risk of low self-esteem, an idea that is a well supported in the TD literature (Guerra, Williams, & Sadek, 2011; O'Moore & Kirkham, 2001). As a result, bully-victims may be less secure within themselves and experience increased anxiety (Glew, Rivara, & Feudtner, 2000) and may thus fear being assertive in social situations (Schwartz, Dodge, & Coie, 1993). The Need-threat model suggests that in order to regain a sense

of self-esteem, bully victims may comply with requests that are made of them in order to improve their social standing and sense of belonging (Williams, 2009).

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterised by qualitative impairments in communication and reciprocal social interaction and a pattern of restricted, repetitive interests and behaviours (American Psychological Association, 2013). Individuals with ASD possess many of the risk factors previously identified in TD individuals that are associated with increased compliance; namely increased anxiety (Gillott & Standen, 2007), reduced self-esteem (Howlin, 2002) and fear of negative evaluation (North, Russell & Gudjonsson., 2008). Thus, a tendency to be overly compliant may feature in this group. Further to this, evidence suggests that young people with ASD are bullied more than TD young people (Cappadocia, Weiss, & Pepler, 2012). Based on the notion that victimisation increases compliance and a subsequent desire to 'fit in' (Harris, 2009) in TD individuals, one might hypothesise that victimisation and compliance would be highly correlated in people with ASD. One might also hypothesise this relationship to be causal; it is well established that individuals with ASD experience social alienation (Jones, Zahl, & Huws, 2001), and may subsequently comply with unreasonable requests for fear of further alienation and a desire to be socially accepted. If accurate, these assertions have important implications: individuals with ASD with a history of victimisation may be at increased risk of coercion or intimidation across a variety of environments. If individuals with ASD are more compliant due to their early life experiences, this may have implications for schools (e.g., for prevention of bullying) or clinicians working with people with ASD (e.g., consent to treatment) and more generally for the lives and day-to-day activities of people living with ASD. There may also be implications for the police, courts and the practice of forensic psychology, as individuals with ASD may engage in activities or behaviours because their early life experiences have rendered them less assertive and limited their ability to 'say no' to others.

At present it is unclear whether individuals with ASD show a greater tendency towards compliance compared with TD individuals. Two studies to date have assessed compliance in people with ASD, both reaching different conclusions. North et al. (2008) reported that individuals with ASD were more compliant, whilst Maras and Bowler (2012) found that those with ASD were as compliant (but no more so) than TD individuals. North et al. (2008) administered the GCS, which comprises a self-report (GCS Form D) and an informant measure of compliance (GCS Form E) to people with ASD. Good agreement was found between the self and informant versions of the

measure with a sample of adults with ASD (see measures section). This would suggest that self-report measures may be a useful tool for assessing compliance in people with ASD. In keeping with the broader literature in this area, North et al. (2008) found that anxiety and fear of negative evaluation were significantly higher in people with ASD when compared with TD individuals. In explaining why people with ASD may be more compliant than individuals without ASD, North et al. (2008) suggested that people with ASD tend to experience low self-esteem and may therefore be less comfortable challenging a request or demand. Indeed, this hypothesis would partially support the aforementioned Need-threat model (Williams, 2009)

In contrast, Maras and Bowler (2012) utilised only the self-report version of the GCS and concluded that individuals with ASD were no more compliant than TD individuals. There are several possible explanations for the discrepancy in findings between the two studies; firstly, both studies used modest sample sizes (North et al. (2008): ASD = 26, TD = 27, Maras and Bowler (2012): ASD = 28, TD = 26), and so the discrepancy between the two studies may simply be due to chance. One alternative explanation might be the effect of psychological constructs that are known to increase compliance; both fear of negative evaluation and anxiety were significantly higher in the ASD group compared with controls in the North et al. (2008) study, a finding that was not replicated in Maras and Bowler (2012). Indeed, the broader compliance literature would suggest that these constructs are important in predicting increased compliance, and so it may have been that the ASD participants in Maras and Bowler (2012) were less predisposed to over compliance. Finally, one potential factor which may account for the discrepancy is associated with recruitment methods employed in the respective studies; nearly 30% of the ASD participants North et al. (2008) were inpatients on a specialist unit for people with ASD, suggesting many participants were experiencing a range of complex emotional difficulties and problems at the time of their participation, meaning that comorbid difficulties such as high anxiety were likely to have been present. In turn, this may have predisposed the sample to increased compliance. In contrast, the sample used in Maras and Bowler (2012) resided in the community and routinely participated in research and so presumably this level of difficulty was absent. This raises two important ideas regarding the assessment of compliance; firstly, that anxiety and fear of negative evaluation may be important constructs with regards to increasing compliance in an ASD population, and secondly, that it is preferable for recruitment methods to be varied in order to increase the external validity of results so that conclusions regarding compliance in people with ASD can be generalised to the wider ASD population.

In discussing why individuals with ASD may be no more compliant than TD individuals, Maras and Bowler (2012) suggested that individuals with ASD may lack an awareness of the social demands being placed upon them, thus making them less susceptible to social conformity. What is also of interest is that the authors note that people with ASD have difficulties with introspection and this may have implications for accurate and valid completion of self-report measures. Given this, and also the discrepancy in findings between North et al. (2008) and Maras and Bowler (2012), it might be suggested that behavioural measures of compliance would be a useful addition to self-report measures in assessing compliance in people with ASD.

In summary, it is presently unclear whether people with ASD are more compliant than TD individuals. The discrepancy in findings between North et al. (2008) and Maras & Bowler (2012) highlights the need to assess compliance by means that enhance established self-report measures of compliance. Based on findings with TD individuals one would expect that high levels of victimisation and compliance would be correlated in people with ASD. Anxiety, fear of negative evaluation and self-esteem also seem to be significantly higher in people with ASD (Maras & Bowler, 2012; North et al., 2008). No study to date has investigated the potential relationships between victimisation, low self-esteem, anxiety related factors and compliance in people with ASD.

This study had several aims; firstly, to ascertain whether people with ASD are more compliant than TD individuals, using both self-report methods and also a novel experimental task to test compliance with an unreasonable request. This study also aimed to replicate previous findings that individuals with ASD experience more early life victimisation compared with TD individuals. Furthermore, the study aimed to investigate the relationship between victimisation and compliance, to see if the Need-threat model could also be applied to an ASD population. As anxiety, fear of negative evaluation and self-esteem have all previously been shown to predict increased compliance in people with ASD, these psychological constructs were also examined with regards to their relationship with compliance.

Hypotheses

It was hypothesised that:

1. Adults with ASD will be significantly more compliant than TD adults on self-report and observational measures of compliance.

2. There will be a significant negative relationship between i) compliance and self-esteem, and significant positive relationships between ii) compliance and fear of negative evaluation, and iii) compliance and anxiety, in people with ASD.

3. Adults with ASD would be more likely to experience early life victimisation compared with TD adults.

4. There would be a significant positive relationship between early life victimisation and self-reported compliance, in both ASD and TD groups.

5. Finally, a significant proportion of the variance in self-reported compliance will be accounted for by early life victimisation, controlling for self-esteem, anxiety and fear of negative evaluation.

Method

Participants and Sampling

An a priori power calculation suggested that in order to detect a large ($F^2 = 0.35$) effect at the 0.05 level of probability, using an hierarchal multiple regression analysis, a total sample size of 59 was required to achieve 95% power.

Two groups of participants were recruited. Participants with ASD (n = 19) were recruited through a number of routes; two local NHS Adult Autism diagnostic services,

the University of Bath's Autism summer school (an experiential course for students with ASD who intended to go to University), research volunteers via advertisements on the University campus, the Psychology Department's Research Participation Scheme, and a database of individuals with a diagnosis of ASD who had consented to being contacted about future research projects being undertaken at the University of Bath. Advertisements were also placed on the National Autistic Society (NAS) website. A number of participants came forward from word-of-mouth (see Table 1).Those interested in participating contacted the lead researcher to participate in the study. All participants confirmed that they had received a clinical diagnosis of Autism or Asperger's Syndrome from a diagnostic clinic.

Comparison participants (n = 19) were adults without a diagnosis of ASD. They were recruited through advertisements at the university campus, using the University's psychology undergraduate research participant scheme, and via word-of-mouth.

All participants were administered the Autism Quotient 10 item scale (AQ-10) (Allison, Auyeung, & Baron-Cohen, 2012) to verify inclusion into either the ASD group or the comparison group. All participants in the control condition scored lower than the recommended cut off of six (see Table 1). One participant in the ASD group scored 0 on the AQ-10, but this was not considered to trump an ascribed clinical diagnosis and the individual remained in the ASD group.

All participants were aged 18 or over, and free from major psychiatric diagnosis at the time of participation. Participants were screened for a learning disability using the Schonell Graded Reading Test (Schonell & Goodacre, 1974), as it was felt having a learning disability may have impaired the completion self-report questionnaires. No participants had to be excluded on the grounds of having a learning disability. All participants identified themselves as fluent in English. All participants were reimbursed £10.00 for their time, following completion of their participation. The ASD and control groups were matched on gender and age to reduce the chance of these factors affecting the variance on the primary outcome measure (compliance).

Groups did not significantly differ on age, t *(36)*=.828, *p* =.413, 95% CI [-3.56-8.48] or gender distribution (X^1 = .432, p = .511). Mean scores on the AQ-10 were, as predicted, highly significantly different between the groups, t *(36)* = 7.177, p = < 0.01, 95% [3.7-6.6], *d* = 2.30 (see Table 1).

Table 1: Participant Demographics

	ASD	Control
n	19	19
Males/Females	12/7	11/8
Age mean (SD)	26.0 (10.2)	23.5 (8.0)
Educational level attained (GCSES/A-Levels/Degree)	4/12/1	1/11/7
AQ-10 mean (SD)	6.8 (2.9)	1.7 (1.2)

Design and Procedure

A cross-sectional, between-groups design was employed. Participation sessions were held at the Department of Clinical Psychology Research and Training at the University of Bath. All participation sessions were facilitated by the lead researcher. All participants read an information sheet and gave signed consent to participate in the presence of the lead researcher. The participant was invited to complete a questionnaire pack (see Measures). Following completion of the questionnaires, unknowingly, participants took part in the experimental compliance task.

Participation took around 40 minutes, which included the self-report questionnaires and experimental compliance task. The procedure was piloted on one student; following this, it was felt that no alterations were required to the procedure.

The study was approved by a full NHS review committee (South Wales Research Ethics Committee: 14/WA/0184), as well as the research and ethics departments of: the University of Bath, and the 2 local NHS sites (see Appendix H and I).

Measures

- **Retrospective Bullying Questionnaire (RBQ) (Schäfer et al., 2004)**: Victimisation was assessed using the RBQ, a 44 item measure assessing bullying and its associated impact in both primary and secondary school. The RBQ has two month test-retest reliability coefficients of: primary school (r = 0.88) and secondary school (r = 0.87) (Hamburger, 2011). Separate scores of victimisation were calculated for primary school and secondary school, by combining scores from physical bullying (e.g., hitting, punching), verbal bullying (e.g., name calling) and indirect bullying (e.g., being excluded), and the severity of these forms of bullying (ranging from *"not at all"* to *"extremely serious")* . A global bullying score was attained by combining the total of primary bullying and secondary bullying. Primary and secondary bullying range = 0 – 15, global bullying range = 0 – 30. This was the first study to date that has utilised the RBQ within an ASD population.

- **The Gudjonsson Compliance Scale (GCS) Form D (Gudjonsson, 1989)**

A 20 item self-report questionnaire measuring the tendency of people to conform to requests made by others, particularly people in authority, in order to please them or to avoid conflict and confrontation. The GCS has previously been used for research with ASD populations (Maras and Bowler, 2012; North et al., (2008). Items (e.g., *"I try my best to please others"*) are in 'true/false' statement format. Higher scores represent increased compliance (Gudjonsson et al., 2004). Form D and Form E (informant version) have been found to have good inter-rater reliability (0.67). Range = 0 – 20.

- **The Rosenberg Self Esteem Scale (RSE) (Rosenberg, 1965)**

A 10 item measure of self-esteem. Items (e.g., *''on the whole, I am satisfied with myself"*) are answered on a four-point scale with reverse scoring for some questions. Higher score represent higher levels of self-esteem. The RSE scale has good test–retest reliability and internal consistency (a > 0.81, Schmitt and Allik (2005), and has previously been used within ASD populations for research purposes (e.g., Maras and Bowler, 2012). Range = 0 – 30.

- **Generalised Anxiety Disorder Assessment (GAD-7) (Spitzer, Kroenke, Williams, & Lowe, 2006)**

A 7 item measure of global anxiety. Items (e.g., *"I have had trouble relaxing")* ask the responder to give their responses based on their perception of the last two weeks, with responses measured on a 4 point scale. The GAD-7 has been shown to possess good reliability, as well as criterion, construct, factorial, and procedural validity (Spitzer et al., 2006). Range = 0 – 21. Participants that scored above 7 (denoting clinically mild levels of anxiety) were contacted following their participation regarding their score and advised to consider contacting their general practitioner for further guidance.

- **The Brief Fear of Negative Evaluation Scale (BFNE) (Leary, 1983)**

A 12 item self-report questionnaire measuring fear of negative evaluation. Responses to statements (e.g., *"I am afraid others will not approve of me")* are measured on a five-point scale, with reverse scoring for some items. Higher scores represent higher fear of negative evaluation. The scale has excellent inter-item reliability (a = 0.97) and 2-week test-retest reliability (r = 0.94)(Collins, Westra, Dozois, & Stewart, 2005) and has been used in previous research with an ASD population (e.g., Maras and Bowler, 2012). Range = 12 – 60.

- **'Door-in-the-face' (DITF) Experimental task**

A behavioural indicator of compliance, first described by Cialdini et al. (1975). It is a technique in which the requester makes two requests, beginning with a costly and unreasonable request, that many, if not most, people should reject. If the initial request is rejected, a second less costly request is made. It is assumed that the refusal of the initial request increases the likelihood of compliance with the smaller request, potentially because feelings of guilt are induced in the respondent for failing to comply with the initial request, increasing social desirability in the respondent. The second smaller request may be viewed as a reasonable concession (Millar, 2002). For the purpose of the current study, responses to both the initial and subsequent request were used as indicators of compliance.

Participants were asked the following initial request upon completion of the paper-based questionnaires:

"Thank you for filling those questionnaires in. I have some more questionnaires here, like the ones you have just completed. There are 30 questionnaires in total, and they should take another two hours to complete. These are optional questions, so you do not have to do them. You will not be paid any extra money for doing them, but

completing them would really help with our research. Would you be willing to complete them now?"

Adherence to the script was followed as closely as possible, but some minor alterations had to be made when participants asked questions or attempted to bargain (e.g., *"I can't complete them now, but would if you posted them to me",* was retorted with *"We need to have them completed in the same session as the questionnaires you have just completed"*). If the participant consented to the initial request, the participant completed one filler questionnaire which was unrelated to the study which took around one minute to complete (The Adult Well-being Scale (Snaith, Constantopoulos, Jardine, & McGuffin, 1978). Upon completion of the filler questionnaire participants were then debriefed. For those participants that replied 'no' to the initial request, the following request was made:
"You're right. 30 does seem like rather a lot. Perhaps you could do 5 for us? Those would take 20 minutes to complete; would you be prepared to complete them now?" If the participant responded positively to the target request, the filler questionnaire was given and the participant was then debriefed upon completion. Participants that refused the target request were told:
"That is no problem at all; they are not important questions anyway. Thank you for taking part". Participants were then debriefed (procedure adapted from Chan & Au (2011).

Following debrief regarding the experimental task, participants were asked about the factors that had influenced their decision making with regards to the unreasonable request.

Data Analysis Plan

Firstly, an independent t-test was undertaken to detect differences on self-reported compliance between the ASD and control group. Next, a Chi-Square analysis was performed to detect differences between the ASD and control group on the experimental task of compliance. Further t-tests were undertaken to test for differences between the ASD and comparison group on the psychological constructs (self-esteem, anxiety and fear of negative evaluation), using a Holm-Bonferroni correction for multiple comparisons. Following this, a Univariate Analysis of Variance was undertaken to

consider whether performance on the behavioural task of compliance and self-reported compliance were in any way related by considering whether there were significant differences on the self-reported compliance measure between three groups of behavioural compliance (i.e., no compliance, 20 minutes and two hours). Subsequently, Pearson Bivariate Correlation Analyses were performed to test for correlations between i) compliance and victimisation, ii) compliance and self-esteem, iii) compliance and anxiety and iv) compliance and fear of negative evaluation. To assess the relationship between compliance and victimisation, further correlations were performed between i) compliance and primary school victimisation, ii) compliance and secondary school victimisation, and iii) compliance and global victimisation. Finally, Hierarchal Multiple Regression was employed to investigate how much of the variance in scores on the GCS was attributable to self-esteem, anxiety and fear of negative evaluation (step 1) and victimisation (step 2) in both groups.

Data concerning influencing factors with regards to the unreasonable request were not formally analysed using qualitative analysis. Instead, responses were grouped into several thematic categories to give an indication of typical reasons for non-compliance/compliance with the experimental task.

Results

Compliance

The ASD and control group differed significantly on self-reported compliance (see Table 2), with the ASD group reporting increased levels of compliance. The control group had a mean score of 8.05 (SD = 2.95) which is comparable with the published norms for university students (7.8 (SD = 4.1)). However, the groups did not differ significantly on experimental task of compliance indicating no differences between the ASD and control group in terms of observed compliance with an unreasonable request. A high number of participants in both groups complied with the initial request of being asked to undertake an additional two hours of questionnaires for no extra reimbursement, with more participants from the ASD group complying compared with the control group (ASD group = 10, Control group = 7).

Table 2: Differences between groups in compliance

		ASD	Control	P	CI 95%	Effect
GCS mean (SD)		11.00 (4.47)	8.05 (2.95)	0.02	0.45 – 5.44	*d* = 0.78
Door in the face N (%)	2 hours	10 (52.6)	7 (38.8)	0.22	-	r = -0.28
	20 minutes	6 (31.6)	11 (57.9)			
	None	3 (15.8)	1 (5.3)			

A Univariate Analysis of Variance was undertaken to test for differences between the means of self-reported compliance (GCS) according to behavioural compliance group. The analysis demonstrated no statistically significant differences between group means $F(2, 35)$, $p = 0.85$, $R^2 = 0.009$, in that there were no significant differences between the means of self-reported compliance where compliance task group was the independent variable (Table 3). However, those that chose to comply with the two hour request were likely to self-report compliance to nearly one point higher on the GCS, compared with the non-compliant participants.

Table 3: Means of self-reported compliance (all participants), according to behavioural compliance group.

	Mean GCS score (SD)	**n**
Non-compliant	9.00 (5.60)	4
20 minutes	9.24 (4.04)	17
2 hours	9.94 (3.86)	17
Total	9.53 (4.0)	38

Of the 17 participants that complied with the two hour request, 11 participants said that they viewed the request as ‘unreasonable’. Typical reasons for choosing to comply included; participants believing research that seeks to identify the vulnerabilities of people with ASD was worthwhile; participants not having engagements following testing; participants wanting to contribute to science and research; participants generally wanting to be helpful, and a small number of participants stated that they had

complied in order to deliberately prevent their subsequent engagements from taking place. One participant stated that they found it interesting and relaxing to complete questionnaires.

Of the 21 participants that did not comply with the unreasonable request, 18 stated that they viewed the request as 'unreasonable'. Typical reasons for not complying with the unreasonable request included; participants believing it was an unreasonable request for no extra reimbursement and participants having engagements following the participation session.

The relationship between self-reported compliance and the psychological traits (anxiety, fear of negative evaluation and self-esteem) was examined in the ASD group. Significant correlations were found between compliance and self-esteem ($r = -.696$, $p = 0.007$) and compliance and fear of negative evaluation ($r = .696$, $p = 0.001$), but not for compliance and anxiety ($r=.368$, $p = 0.121$).

In terms of differences on the psychological constructs between the groups, the ASD group reported significantly more anxiety than the control group, but no differences were found between the groups in fear of negative evaluation or self-esteem. A number of participants scored within the clinical range (above seven on the GAD-7) for anxiety (ASD, n = 12, control, n = 3).

Table 4: Differences between groups on psychological constructs

	ASD mean (SD)	Control mean (SD)	t	p	95% CI	Effect (*d)*
Self Esteem	18.74 (7.10)	22.42 (5.41)	-1.8	0.08	-7.83 – 0.47	
Anxiety	8.47 (6.20)	3.47 (2.89)	3.18	0.03	1.81 – 8.19	1.0
Fear of Negative Evaluation	38.00 (12.32)	34.21 (10.25)	1.02	0.31	-3.72 – 11.34	

Early life Victimisation

The ASD and control group differed significantly in experiences of global early life victimisation with the ASD group experiencing significantly more victimisation (see Table 4). Furthermore, higher levels of victimisation were experienced by the ASD group in both primary school and secondary school compared with the control group.

Table 5: Differences between groups in early life victimisation

	ASD	Control	t	p	95% CI	effect (d)
RBQ Global	16.11 (8.92)	5.79 (7.04)	9.96	< 0.05	5.02 – 15.60	1.60
RBQ Primary	8.89 (4.65)	3.74 (5.12)	3.25	< 0.01	1.94 – 8.38	1.05
RBQ Secondary	7.21 (5.28)	2.05 (3.19)	3.67	< 0.01	2.31 – 8.01	1.18

The relationship between compliance and early life victimisation

There was no statistically significant correlation between early life victimisation and self-reported compliance in either the ASD or control group. However, in the ASD group self-reported compliance and both victimisation total and secondary school victimisation demonstrated trends towards significance, with higher levels of victimisation correlating with increased self-reported compliance (see Table 4).

Table 6: Correlations between victimisation and compliance, between groups

	ASD	Control
GCS/RBQ Total	.412 (p = .079)	.340 (p = .155)
GCS/RBQ Primary	.275 (p = .255)	.251 (p = .300)
GCS/RBQ Secondary	.454 (p = .051)	.356 (p = .135)

Hierarchal multiple regression analysis was undertaken across the dataset to assess how much of the variance on self-reported compliance was accounted for by early life victimisation. Age and gender were not entered into the equation as there were no

differences between the groups. Step 1 (fear of negative evaluation, anxiety and self-esteem) accounted for 55.3% of the variance on scores of compliance, and significantly predicted scores on compliance, $p < 0.01$. At step 2 (when victimisation was entered into the equation) this accounted for a further 6.3% of the variance, and the model was still significant, $F(4,36) = 15.418$, $p < 0.01$, $R^2 = 0.658$. Only fear of negative evaluation and victimisation were retained in the model, $p = <0.05$.

Discussion

This study found that people with ASD reported significantly more compliance compared with people without ASD, in line with North et al.'s (2008) finding. This was the first study to our knowledge that utilised a measure of observed compliance with an unreasonable request in people with ASD. Using this experimental task, no significant differences between the two groups (ASD and non-ASD) were found. No significant difference was found between the behavioural compliance groups in self-reported (GCS) compliance scores, suggesting that the experimental task of compliance used in this study has little predictive validity in terms of predicting self-reported compliance. Contrary to previous studies that have found higher levels of fear of negative evaluation and lower self-esteem in individuals with ASD, no significant differences were found between the ASD and control group. However, the ASD group reported significantly more anxiety compared to the control group. Further to this, significant correlations between the following constructs were found in the ASD group: i) compliance and fear of negative evaluation and ii) compliance and self-esteem, but no correlation was found between anxiety and compliance, in contrast to previous research (Maras & Bowler, 2012).

The results of this study support previous research which suggests people with ASD experience significantly more early life victimisation than individuals without ASD, and this finding was consistent across both primary and secondary school. The hypothesised relationship between early life victimisation and compliance in both ASD and TD individuals was not established in this study; early life victimisation did account for a small but significant proportion of the variance in scores on the self-report measure of compliance. These findings are considered in more detail.

This study partially supports the previous finding that people with ASD report a greater tendency towards compliance with the requests of others (North et al., 2008). This study found that adults with ASD self-report higher levels of compliance, in line with North et al. (2008), but in contrast to Maras and Bowler who failed to find a significant difference in self-reported compliance. Given that fear of negative evaluation was significant in predicting increased scores in self-reported compliance in the current study, and also that compliance and self-reported compliance were highly correlated in the ASD group, it might be suggested that Maras and Bowler's (2012) suggestion that fear of being negatively evaluated may be crucial in predicting increased compliance. Therefore, it maybe that individuals with ASD are not predisposed to be overly compliant per-se, but that those who fear negative judgement by others are likely to comply in order to be perceived in a positive light by others.

There was no significant difference between the mean scores of the three behavioural compliance groups. Further to this, the current study did not find any significant differences in behavioural compliance between the ASD and control group, as measured by the experimental task. What might account for a lack of difference between the two groups in the behavioural measure of compliance? Firstly, the chi squared analysis of behavioural compliance was not significant, and the effect size for the difference was small, and so it may simply be that people with ASD are no more compliant than TD individuals when unreasonable requests are made of them. However, 52% of the ASD group complied with the two hour request, compared to 38.8% of the control group, which represents a difference of sorts. It is possible that with a larger sample this pattern may have continued and resulted in significance.

One further explanation for this lack of significance might be held in the limitations associated with the validity of the task; when asked what factors influenced the participant's decision to stay for two hours, many participants believed the project was worthwhile and wished to help the researchers contribute to the evidence base. Given also that all of the individuals with ASD were self-selecting and had travelled to participate, and their 'compliance' with the task may have actually been a reflection of their willingness and desire to participate in research, as opposed to an indicator of compliance. Further to this, a significant number of participants in the study were students themselves and so presumably had a commitment to furthering science; therefore, the nature of the experiment may have threatened the task's validity. This may explain why a high number of participants in both groups complied with the unreasonable request as the experimental task was not independent of the context in

which it was undertaken; future research employing experimental tasks of compliance may wish to consider making an unreasonable request that is unrelated to the purpose for which participants are undertaking testing, for example, by making an unreasonable social request of the participant. However, this would require careful consideration from an ethical and moral perspective. Alternatively non-student populations might be used to reduce the likelihood of bias towards the specified paradigm in the control and experimental groups.

This study further supports the well-established finding that individuals with ASD are bullied more than TD individuals (e.g., Cappadocia et al., 2012). What was striking from this study was the extent to which individuals with ASD reported retrospective bullying, with highly significant differences found between the ASD and control groups. However, there was not a statistically significant correlation between victimisation and compliance in the ASD group. One explanation for this is that there may be a range of responses from people with ASD to the experience of being bullied besides a tendency to be overly compliant in an effort to be socially accepted. Alternative 'coping' strategies may include developing reluctance to trust others or becoming self-isolated, patterns which have been observed in people with ASD following victimisation (Humphrey & Symes, 2010). Thus, people with ASD may not show a uniform or homogeneous pattern of vulnerabilities following victimisation, and there may be alternative psychological and social variables associated with adjustment following bullying.

Whilst there was not a statistically significant correlation between global victimisation and compliance in the ASD group, there was certainly a trend towards significance in global victimisation and secondary school victimisation in the ASD group. With a larger sample this is likely to have lead to a significant result. Therefore, it cannot be ruled out that there is a relationship between victimisation and compliance, given also that scores on victimisation accounted for a significant proportion of the variance on self-reported compliance. If it were the case that a relationship exists between victimisation and compliance, there may be two causal explanations for this relationship; firstly, it is plausible that people with ASD who are compliant and lack assertiveness are more likely to be bullied as a result. In contrast, the Need-threat model does infer causality of this relationship, suggesting that victimisation, ostracism and social exclusion might lead to reduced self-esteem and cause individuals to become more compliant. However, no differences in self-esteem between the two groups were found in this study, but this finding was in contrast to previous research (e.g., Maras and Bowler,

2012). Therefore, based on the findings of this study alone, it is not possible to infer causality of the relationship between victimisation and compliance and these potential hypotheses require further investigation.

Interestingly, there was not a relationship between victimisation and compliance in the control group. This might be explained in relation to the idea that people without ASD may have a range of social and adaptive responses to being bullied; some may seek social support from other peer groups or adults, retaliate to bullies, express assertiveness, or themselves turn to bullying in order to improve self-esteem (Williams, 2009). In contrast, individuals with ASD may be less able to utilise a range of complex social strategies to regain a sense of self-esteem and social standing, due to the difficulties associated with navigating the social world which are characteristic of ASD.

Limitations

The study is limited by small sample size and a lack of statistical power; a post-hoc power analysis indicated that 0.65 power was achieved. Therefore, the results of this study should be interpreted with caution. Whilst the sample size was small, recruitment methods were varied and participants encapsulated a wide range of ages and a variety of years in education. This suggests that the results of the present study may generalise well to the high functioning ASD population.

This study employed a retrospective measure of bullying which had not previously been used with an ASD population. There are several problems with this; specifically, people with ASD exhibit reductions in the speed and specificity of autobiographical memory retrieval. Crane, Pring, Jukes, and Goddard (2012) summarise that adults with ASD often fail to frame their personal memories within a wider context and tend to store their memories as isolated events, in contrast to TD individuals who tend to report individual events and link them to other related events or themes. This might suggest that there is a tendency for adults with ASD to interpret vivid and emotive memories of bullying as representative of their entire school experience, thus leading to the possibility of over-reporting of victimisation. However, given the substantial body of research suggesting individuals with ASD are at increased risk of victimisation, this explanation is questionable. Future research assessing the impact of bullying on

psychological constructs might benefit from using longitudinal methodologies, to see how bullying affects people with ASD over time.

There are ethical and moral issues with this study. Participants were deceived as part of the experimental task. It could be argued that deliberately deceiving a group of people that are at high risk of victimisation may further cause them distress, embarrassment or humiliation. However, when debriefed about the nature of the experimental task, the majority of participants reported not feeling aggrieved as a result of the task. Indeed, the majority also reported that they appreciated the need to highlight if people with ASD are vulnerable in some social situations.

Implications

This study tentatively suggests that people with ASD with a history of victimisation are more likely to report higher compliance. This has important implications for a range of professionals from the health and social care, education and the criminal justice system. Professionals should encourage people with ASD to make free choices regarding their health, care, access to services, treatments etc., as opposed to being led by others with greater assertiveness, whilst also being mindful that people with ASD may feel more comfortable in being led in decision making by others. Furthermore, these agencies might consider implementing items or procedures in assessments that specifically assess experiences of ostracism and bullying, which may give an insightful indication of how compliant people with ASD are likely to be.

This study highlights the need for identifying children and adolescents with ASD that are currently, or at risk, of being bullied and ostracised. Subsequently, bully victims with ASD should be offered appropriate support or intervention. In a recent study, Humphrey and Symes (2010) suggested that classmate support was the strongest predictor of bullying frequency, and so engendering appropriate peer support for pupils with ASD may be an efficacious method to reduce bullying. Schools and colleges may wish to consider how this is achieved in their individual services and establishments. Further to this, Laugeson, Frankel, Gantman, Dillon, and Mogil (2012) have found a parent assisted social skills group (PEERS) to be efficacious in improving social awareness and assertion in young people with ASD, and these gains appeared to be maintained at three month follow up, suggesting sustained improvements. These are promising findings and if future research demonstrates a causal relationship between

bullying and compliance, effective intervention may limit the negative future impact of bullying and ostracism in people with ASD.

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Executive Summary

Early life Victimisation and Compliance in People with Autism Spectrum Disorders (ASD)

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People that have been bullied or socially excluded, fear negative evaluation by others, have high anxiety, or have low self-esteem, are likely to report being overly compliant with requests that are made of them. Research has suggested this may be because these people want to 'fit in' and improve their sense of self-esteem, which may have been reduced as a result of bullying. Thus, people may be more likely to 'go along' with requests that are made of them, or perhaps do things they do not wish to do.

Autism Spectrum Disorder (ASD) is a neurodevelopmental condition and one of the main features associated with ASD is difficulties with social interaction and social communication. It is important to understand the potential vulnerabilities of people with ASD; it has been suggested that people with ASD may have a tendency to be overly compliant with requests that are made of them. If people with ASD have a tendency towards over-compliance this may leave them at increased risk of exploitation across many domains (relationships, finances, engaging in criminal activities etc.).

People with ASD are at increased risk of bullying and social exclusion from an early age. Furthermore, research has found that people with ASD tend to have higher anxiety, lower self-esteem, and fear being negatively evaluated by other people, more so than people who do not have ASD. Therefore, people with ASD possess many of the 'risk factors' which may lead them to be overly compliant.

Whilst research has consistently found that people with ASD i) are victimised more than people who do not have ASD and ii) have reduced self-esteem, increased anxiety, and increased fear of negative evaluation, compared to people without ASD, research to date has failed to conclude whether people with ASD are more compliant than people without ASD. One problem with the studies in this area is that they have used questionnaires to assess compliance (e.g., by getting people to rate how compliant they are), as opposed to *testing* how compliant people are.

The current study compared a group of people with ASD (19) to a group of people without ASD (19), to try and understand firstly, whether people with ASD were more compliant and secondly, if it were found that the ASD group were more compliant, some of the factors that may explain why that was the case. All participants completed questionnaires about their self-esteem, anxiety, how much they feared negative evaluation from others, and how compliant they considered themselves to be. Participants also completed a questionnaire about their history of being bullied and

socially excluded. Further to these questionnaires, participants were then tested to see how compliant they would be with an unreasonable request that was made of them; they were made to think that the researcher wanted them to complete a further 2 hour's worth of questionnaires, for no extra monitory reimbursement. None of the participants had to complete the extra questionnaires even if they agreed; all were told about the nature of the experiment almost straightaway, after having given an answer to the unreasonable request.

In summary, the main findings of this study were:

- People with ASD experience significantly more bullying and social exclusion than people without ASD.
- People with ASD reported that they were significantly more compliant, compared with people without ASD.
- In terms of the experimental test of compliance, people with ASD were generally no more compliant than people without ASD. Although more people with ASD complied with the unreasonable request, the difference between the two groups was relatively modest.
- There appeared to be a link between high levels of bullying/social exclusion and increased compliance, in people with ASD.
- People with ASD had significantly higher anxiety than people without ASD, but both groups were similar in terms of their levels of self-esteem and the extent to which they feared negative evaluation by others.

This study concluded that people with ASD appear to generally be more compliant than people without ASD (given that people with ASD reported higher compliance, and a greater number of people with ASD complied with the experimental test, compared to the group of people without ASD). It was also concluded that people with ASD who experience a high level of bullying and social exclusion, are particularly likely to have a tendency to be overly compliant later on in life.

There were several weaknesses and limitations in terms of how this study was undertaken; firstly, the study used a relatively small number of participants, which presents difficulties with making representative claims regarding everybody who has ASD. One other limitation is that the experimental test involved deceiving people, which

should be avoided in psychological research. In addition, it may have been that the experimental task was not as well designed as it could have been; people may not have been complying with the task because they were being compliant, indeed some people said that they liked filling in questionnaires, or thought it was worthwhile and fulfilling to help researchers, and so did not view the request as unreasonable.

Despite these limitations, these findings have important implications for a range of agencies and organisations; it is important for agencies such as the police and courts to appreciate that people with ASD might be more likely to ‘go along’ with requests that are made of them (e.g., with what a solicitor is telling them). It is also important for health and social care professionals to ensure that people with ASD that are required to make choices about their care, health or treatments do so in a manner that is independent of coercion. The findings of this study also stress the need for effective interventions that tackle bullying in schools.

Connecting Narrative

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One aspect that drew me Bath Doctorate training course was the emphasis on undertaking clinically relevant research across the lifespan. I have chosen to present this reflective narrative in the format of undertaking research across the lifespan, to highlight how I have learnt from the rich variety of my research and placement experiences. Below is a reflective account of the process of undertaking clinically relevant research throughout my three years of clinical training.

The very early years

Both my C5 case study and Critical Review of the Literature paper are based upon promoting sensitive and attuned relationships between the parent and infant. I had had very limited experience of Attachment Theory interventions to promote secure attachment throughout my training, until the third year when I embarked on my placement with Family Assessment and Safeguarding Service. I was fortunate enough to have a team member (Martin Elliott) who was a qualified Video Interaction Guidance supervisor and he invited me to work on a case with him. As he had collected assessment measures prior to beginning therapeutic work, I decided early on that I would use this work as my case study. It was from this that my interest in undertaking therapeutic work designed to improve the parent-child attachment relationship developed.

Subsequently, I decided to undertake my Critical Review of the Literature in this area. However, this had not been the original project; I had originally planned to undertake my review in psychological interventions for Attention Deficit and Hyperactivity Disorder (ADHD) in young people. Unfortunately, during my first year of training, as I was about to begin the review, the very same review was published in a journal elsewhere. This was disappointing, given that I had given substantial time and effort into researching the area, refining my research questions and writing a proposal for the review. During my second year of training, I looked for another review topic. Given this was when we had received high quality neuropsychology teaching, I decided to undertake my review in coping with Acquired Brain Injury. Again, I wrote a detailed proposal relating to this review, under the supervision of Dr Andrew Medley (Research Tutor). Soon after, Andrew announced that he would be leaving the course, and would be unable to provide supervision for the project after his departure. This left me in a difficult position; I was in my third year of training, and still had not begun my critical review of the literature paper, due to situational factors.

I was fortunate that I had exposure on placement to video interventions to promote parental sensitivity, and after reviewing the literature, I discovered that the last review of video feedback interventions for improving parental sensitivity had been undertaken in 2008. I therefore decided that I would undertake my review in this area.

I feel that my literature review was completed somewhat hastily. It sat rather uncomfortably with me, as I wish to give time and approach research projects in a methodical and timely manner. However, I was fortunate to have high quality supervision on the review from Dr Catherine Hamilton-Giachritsis, who was able to provide feedback in a timely manner.

From this experience, I have learnt that in research, sometimes one can make plans to complete projects in a timely way, but situational and contextual factors may limit one's ability to undertake projects in the manner in which one would wish.

Children and Young People

Two of my case studies have involved young people, between the ages of 10 and 18. A significant part of my pre-training experience was with young people with Autism, and so I approached my Child and Adolescent placement with a degree of confidence, knowing that I had some experience in this area.

Before my CAMHS placement, the first opportunity I had to work with a young person was ironically on my working age adult placement; the individual had turned 18 just a few weeks before we began work together. I had some experience of working with young people with tics and Tourette Syndrome from my pre-training experience, and so looked forward to working in a more formal format in terms of the Cognitive Behavioural Therapy (CBT) as part of this case. Significant reductions in tic severity and improvements in quality of life were demonstrated in the case, which was encouraging. Also, on this placement I worked with a gentleman with compulsive skin picking, and so felt that I may be developing an interest in cognitive behavioural interventions for people with movement and habit disorders.

I furthered this interest during my CAMHS placement, and completed my case study whilst working with a young man with Tourette Syndrome. Again, significant improvements in symptom severity were demonstrated. I believe my knowledge of

Tourette's and tic disorders improved significantly during my second year of training. I also gained specific knowledge of Tourette's and tics through my reading of the work of key authors in the field (most notably, Kieron O'Connor).

Adults

The majority of my research projects and case studies have featured adults; the main research project, service improvement project and case study C3 (although case studies C1 and C5 also featured adults, these have already been discussed).

The idea for my main research project developed out of my existing knowledge of Autism Spectrum Disorders (ASD). As previously mentioned, a significant amount of my pre-training experience had been undertaken with young people with ASD. I was also interested in forensics, which again I believed stemmed from my pre-training experience. During my work with young people with ASD, I had noticed that some of the young people I had worked with had a tendency to be overly compliant with requests that were made of them, and more strikingly, that those who had had difficult life experiences and experienced a high level of exclusion or victimisation were perhaps more compliant than those without those experiences.

I discussed these initial ideas with Dr Ailsa Russell (Clinical Director) as I was aware of both her expertise in the field of ASD, and also of compliance. I suggested that a cross sectional design to explore this hypothesis might be useful. Ailsa wondered whether an aspect that might give the research an 'edge' might be to include an experimental measure of compliance (essentially, a deception task). I was initially hesitant about this; I had remembered from as early as A-Level psychology (and most notably from Milgram's (1961) infamous study of obedience) that deception tasks should be avoided in psychological research as far as possible. However, given my passion for working with people with ASD, it felt appropriate that a deception task should be utilised to strengthen pre-existing research that had eluded to the idea that people with ASD are more compliant than the typically developing population.

After formulating the research project and writing the proposal, I began completing my application form for NHS ethical approval. I was keen to emphasise in this document that the deception task was an essential component to the project, as without it, we would be adding very little to the evidence base.

The meeting with the South Wales Research Ethics Committee was somewhat daunting; several members of the panel were quite opposed to the experimental task, for fear that it would embarrass or humiliate participants. I was fortunate to be joined at this meeting by Ailsa, who modelled responding to criticisms and at times, some hostility, with a non-defensive stance. I was also pleased to hear at the meeting that many members of the panel felt that the experimental task would add significant value to the project, and that on balance, the gains of utilising the task were worth the costs.

One of the biggest challenges with the project has been recruitment of ASD participants. Initially, the power calculation for the project was 60 individuals in total. At the time of writing, this number is around two thirds of the original power calculation. What factors might account for difficulties in recruitment?

Firstly, I have learned that NHS and any qualified provider services for people with ASD can be incredibly busy. Therefore, helping to recruit for research projects might understandably not be a priority for clinicians.

There have also been significant delays in using a recruitment method known as 'Everyone Included'. This system enables an approved trust (in this case, Avon and Wiltshire Mental Health Partnership Trust) to write to all service users within a particular service (in this case, the Wiltshire Autism Diagnostic Service (WADS), with details of a research study. When I discovered AWP were an Everyone Included Trust, I found this exciting, as I was aware that WADS had assessed and diagnosed over 200 individuals with ASD. This was initially where I had planned to recruit the majority of my participants from. Unfortunately, even though the South Wales Research Ethics Committee had approved the recruitment method, following this approval AWP insisted that the REC once again review the EI paperwork, as several documents were not available for the original REC meeting (this was because Everyone Included was a new system within the trust, and the paperwork had not been constructed at that point). There were significant delays in accessing the paperwork that AWP wanted to be reviewed; the EI team apologised for their lack of contact over the course of a three month period. There was also then another significant delay in the time period between submitting the paperwork to the REC, and the REC meeting to give approval.

Throughout training, several clinical psychologists have spoken about the bureaucracy that can feature in terms of gaining ethical approval. Whilst I understand the need to protect participants from harm, and see this as paramount when undertaking research,

occurrences such as these can be frustrating, and have the potential to significantly limit the number of participants that can be recruited in a limited time period. It will be important for me to hold this experience in mind when undertaking future research projects, and recognise that delays with planned recruitment may be costly.

Undertaking the project itself has been fascinating; one of the emotional challenges involved with undertaking the project has been the deception task. As a clinical psychologist, it feels counterintuitive to deceive research participants. At the times during the experimental task when I had these thoughts, I challenged some of these thoughts by reminding myself of the reason that the deception task had been included. It was rather disappointing when analysis revealed that there were no differences in the experimental task between the ASD and control group, but this was negated by the numerous results that were interesting, most notably that there does appear to be a link between victimisation and future compliance in adults with ASD. This experienced also highlighted for me how unusual and varied the role of the clinical psychologist is, and highlighted how a clinical psychologist may need to 'switch' from a clinical role to a researcher role. This was something that was important to reflect upon during research supervision.

One other research project that displayed promising and useful results was my service improvement project, which assessed levels of burnout in clinicians working with offenders with personality disorders, and also explored how burnout might arise within this population.

I found one contributing factor to the success of implementing this project was having a good working relationship with the service concerned, and in particular having supervisors that fully supported the project. I was fortunate to finalise my proposal under the supervision of Dr Ceri Jones, a clinician working within the team. She spent considerable time with me refining the research questions for the project. Shortly before I was due to submit the proposal for the project, supervision of the project was taken over by Dr Andrew Newman. I developed a strong working relationship with Andrew, who was instrumental in helping to organise some of the logistical issues involved in research (e.g., sending reminder emails to clinicians, booking rooms, advising on optimum times to book focus groups etc.).

I also saw the value of having 'fall back strategies' in research; initially, utilising a focus group to gather information about staff experiences of burnout was proposed as a

fallback strategy. However, when open ended questionnaires did not yield sufficient data for analysis, a focus group was utilised, and provided rich data which contributed to the overall findings of the project. I will be mindful for future projects to have fall back strategies to use if the originally proposed plans cannot be adhered to.

Something that particularly pleased me about this project was the practical implications that came from the findings. Ideas were implemented following the project; a leaflet for newly starting staff was devised, as well as a weekly mindfulness group to help alleviate staff stress and burden. This is an example of when research can be used to develop aspects of a service, whilst also contributing to the overall evidence base.

Linking to the concept of well-being is my C3 case study, which evaluated a community well-being group for adults with learning disabilities. I can confidently say that this was one of the clinical pieces of work that I most enjoyed undertaking. Planning, organising and setting up a group in clinical practice can be a time consuming process. Initially, my supervisor (Dr Hannah Tynan) and I decided that it would be appropriate to undertake pre-group interviews with potential group members to clarify goals for the group, and also help us to foresee any potential group dynamics that might arise. This is certainly something that I would look to employ in any future groups that I undertake.

In retrospect, I regret not employing informant measures of well-being in this project, as I believe it was probable that significant improvements would have been found. I discuss this issue in greater detail in the case report itself.

Later life

I undertook my C2 case study with an older gentleman who was suffering from steroid induced psychosis, as a result of medical treatment given for developing cancer. The gentleman was an inpatient on an older adult's psychiatric ward, and was receiving antipsychotic medication. It is unlikely that the gentleman would have been referred for psychological therapy; it happened to be present at ward round on the day that his case was reviewed, and I suggested that therapy might be useful. Given that I had received high quality and informative teaching from the course (most notably, Tony Morrison, amongst others) I was aware that CBT could be utilised with individuals with psychosis.

I remember meeting with the gentleman initially; he appeared very suspicious of my intentions to work with him. I remembered a key point from our teaching stressing the importance of 'getting alongside' individuals with psychosis, and not opposing nor colluding with his delusional beliefs. This appeared to be an effective strategy and the brief intervention appeared to be effective in reducing delusional conviction.

I had further experience of undertaking my consultancy project in the area of End of Life care for people with learning difficulties, and details and reflections of this are provided in the professional portfolio.

Summary

I believe that undertaking my doctorate training on the Bath course has continued to support my commitment to undertaking clinically relevant research. The importance of undertaking research in my future career has been emphasised by the course team throughout training.

I believe that is essential that clinical psychologists continue to add to the research evidence base in clinical practice; whether this is by means of large research project, or single case designs. I believe this is something that I will undoubtedly take into my professional career.

Completing my case study portfolio has given me the skills and confidence to undertake clinically relevant research. I believe that course teaching has provided me with a sound knowledge of single case designs, experimental designs etc. In particular, I believe that I am mindful with every case to try and collect baseline measurements, where feasible and appropriate. I wholly believe that this is a 'good habit to get in to', and provides the possibility for any piece of clinical work to be written as a case report. I will endeavour throughout my professional career to continue this practice.

Acknowledgements

Firstly, I wish to thank my Clinical Tutor and course director, Professor Paul Salkovskis. His support throughout my training, both professionally and personally, has been invaluable. I would also like to thank Dr Ailsa Russell, for imparting her knowledge and experience of people with developmental disorders during the supervision of my main research project. I also wish to thank Dr Katie Maras, for her insightful supervision and guidance with my main research project; her expertise in forensic aspects of Autism has proved invaluable. I wish to thank Dr Catherine Butler for her helpful and constructive feedback with my service improvement project. I also wish to thank Dr Andrew Newman, for his logistical support in undertaking my service improvement project within his service, and also for his enthusiasm and commitment to the project. I would like to thank Dr Catherine Hamilton-Giachritsis for her supervision with my critical review of the literature. With regards to this project, I also wish to thank Dr Laura Pettigrew for her supervision, and more generally for her guidance and support throughout my final year of training.

I also wish to thank the clinicians from Pathfinder, for their insight into working with offenders with personality disorders, and also for supporting my service improvement project. I wish to thank the individuals that participated in my main research project; their participation was greatly appreciated.

Finally, I wish to thank Charlene and my family, friends and fellow trainees for their support throughout the training process.

Appendices

Appendix A: CASP (Randomised Controlled Trials)

11 questions to help you make sense of a trial

How to use this appraisal tool

Three broad issues need to be considered when appraising the report of a randomised controlled trial:

- **Are the results of the trial valid?** **(Section A)**
- **What are the results?** **(Section B)**
- **Will the results help locally?** **(Section C)**

The 11 questions on the following pages are designed to help you think about these issues systematically.
The first two questions are screening questions and can be answered quickly. If the answer to both is "yes", it is worth proceeding with the remaining questions.

There is some degree of overlap between the questions, you are asked to record a "yes", "no" or "can't tell" to most of the questions. A number of prompts are given after each question. These are designed to remind you why the question is important. Record your reasons for your answers in the spaces provided.

There will not be time in the small groups to answer them all in detail!

Appendix A (continued)

(A) Are the results of the trial valid?

Screening Questions

1. Did the trial address a clearly focused issue? ☐ Yes ☐ Can't tell ☐ No

HINT: An issue can be 'focused' in terms of

- The population studied
- The intervention given
- The comparator given
- The outcomes considered

---

2. Was the assignment of patients to treatments randomised? ☐ Yes ☐ Can't tell ☐ No

HINT: Consider

- How was this carried out?
- Was the allocation sequence concealed from researchers and patients?

---

3. Were all of the patients who entered the trial properly accounted for at its conclusion? ☐ Yes ☐ Can't tell ☐ No

HINT: Consider

- Was the trial stopped early?
- Were patients analysed in the groups to which they were randomised?

Appendix A (continued)

Is it worth continuing?

Detailed questions

4. Were patients, health workers and study personnel 'blind' to treatment? ☐ Yes ☐ Can't tell ☐ No

HINT: Think about

- Patients?
- Health workers?
- Study personnel?

---

5. Were the groups similar at the start of the trial? ☐ Yes ☐ Can't tell ☐ No

HINT: Look at

- Other factors that might affect the outcome such as age, sex, social class

Appendix A (continued)

6. Aside from the experimental intervention, were the groups treated equally? ☐ Yes ☐ Can't tell ☐ No

(B) What are the results?

7. How large was the treatment effect?

HINT: Consider

- What outcomes were measured?
- Is the primary outcome clearly specified?
- What results were found for each outcome?

---

8. How precise was the estimate of the treatment effect?

HINT: Consider

- What are the confidence limits?

Appendix A (continued)

(C) Will the results help locally?

9. Can the results be applied in your context? (or to the local population?) ❒ Yes ❒ Can't tell ❒ No

HINT: Consider whether

- Do you think that the patients covered by the trial are similar enough to the patients to whom you will apply this?, if not how to they differ?

---

10. Were all clinically important outcomes considered? ❒ Yes ❒ Can't tell ❒ No

HINT: Consider

- Is there other information you would like to have seen?
- If not, does this affect the decision?

---

11. Are the benefits worth the harms and costs? ❒ Yes ❒ Can't tell ❒ No

HINT: Consider

- Even if this is not addressed by the trial, what do you think?

Appendix B: CASP (Case Controlled series)

11 questions to help you make sense of case control study

How to use this appraisal tool

Three broad issues need to be considered when appraising a case control study:

- **Are the results of the trial valid?** **(Section A)**
- **What are the results?** **(Section B)**
- **Will the results help locally?** **(Section C)**

The 11 questions on the following pages are designed to help you think about these issues systematically.
The first two questions are screening questions and can be answered quickly. If the answer to both is "yes", it is worth proceeding with the remaining questions.

There is some degree of overlap between the questions, you are asked to record a "yes", "no" or "can't tell" to most of the questions. A number of prompts are given after each question. These are designed to remind you why the question is important. Record your reasons for your answers in the spaces provided.

There will not be time in the small groups to answer them all in detail!

Appendix B (continued)

(A) Are the results of the study valid?

Screening Questions

1. Did the study address a clearly focused issue? ☐ Yes ☐ Can't tell ☐ No

HINT: A question can be focused in terms of

- The population studied
- The risk factors studied
- Whether the study tried to detect a beneficial or harmful effect?

---

2. Did the authors use an appropriate method to answer their question? ☐ Yes ☐ Can't tell ☐ No

HINT: Consider

- Is a case control study an appropriate way of Answering the question under the circumstances? (Is the outcome rare or harmful)
- Did it address the study question?

Is it worth continuing?

Appendix B (continued)

Detailed questions

3. Were the cases recruited in an acceptable way? ❒ Yes ❒ Can't tell ❒ No

HINT: We are looking for selection bias which might compromise validity of the findings

- Are the cases defined precisely?
- Were the cases representative of a defined population? (geographically and/or temporally?)
- Was there an established reliable system for selecting all the cases
- Are they incident or prevalent?
- Is there something special about the cases?
- Is the time frame of the study relevant to disease/exposure?
- Was there a sufficient number of cases selected?
- Was there a power calculation?

---

4. Were the controls selected in an acceptable way? ❒ Yes ❒ Can't tell ❒ No

HINT: We are looking for selection bias which might compromise The generalisibilty of the findings

- Were the controls representative of defined population (geographically and/or temporally)
- Was there something special about the controls?
- Was the non-response high? Could non-respondents be different in any way?
- Are they matched, population based or randomly selected?
- Was there a sufficient number of controls selected?

Appendix B (continued)

5. Was the exposure accurately measured to minimise bias? ☐ Yes ☐ Can't tell ☐ No

HINT: We are looking for measurement, recall or classification bias

- Was the exposure clearly defined and accurately measured?
- Did the authors use subjective or objective measurements?
- Do the measures truly reflect what they are supposed to measure? (Have they been validated?)
- Were the measurement methods similar in the cases and controls?
- Did the study incorporate blinding where feasible?
- Is the temporal relation correct? (Does the exposure of interest precede the outcome?)

---

6. (a) What confounding factors have the authors accounted for? List:

HINT: List the ones you think might be important, that The author missed.

- Genetic
- Environmental
- Socio-economic

(b) Have the authors taken account of the potential confounding factors in the design and/or in their analysis? ☐ Yes ☐ Can't tell ☐ No

HINT: Look for

- Restriction in design, and techniques e.g. modelling stratified-, regression-, or sensitivity analysis to correct, control or adjust for confounding factors

Appendix B (continued)

7. What are the results of this study?

HINT: Consider

- What are the bottom line results?
- Is the analysis appropriate to the design?
- How strong is the association between exposure and outcome (look at the odds ratio)?
- Are the results adjusted for confounding, and might confounding still explain the association?
- Has adjustment made a big difference to the OR?

(B) What are the results?

8. How precise are the results?

How precise is the estimate of risk?

HINT: Consider

- Size of the P-value
- Size of the confidence intervals
- Have the authors considered all the important variables?
- How was the effect of subjects refusing to participate evaluated?

---

9. Do you believe the results? ❒ Yes ❒ No

HINT: Consider

- Big effect is hard to ignore!
- Can it be due to chance, bias or confounding?
- Are the design and methods of this study sufficiently flawed to make the results unreliable?
- Consider Bradford Hills criteria (e.g. time sequence, dose-response gradient, strength, biological plausibility)

Appendix B (continued)

(C) Will the results help locally?

10. Can the results be applied to the local population? ❒ Yes ❒ Can't tell ❒ No

HINT: Consider whether

- The subjects covered in the study could be sufficiently different from your population to cause concern
- Your local setting is likely to differ much from that of the study
- Can you quantify the local benefits and harms?

---

11. Do the results of this study fit with other available evidence? ❒ Yes ❒ Can't tell ❒ No

HINT: Consider all the available evidence from RCT's, systematic reviews, cohort studies and case-control studies as well for consistency.

Remember

One observational study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making.
However, for certain questions observational studies provide the only evidence.
Recommendations from observational studies are always stronger when supported by other evidence.

Appendix C: Demographic Information (Service Improvement Project)

Age (please circle): 18 – 25
26 – 35
36 – 45
46 – 55
56 – 65
65 +

Length of Employment within Pathfinder: _____ years, and _____ months

Currently, how many hours per week are you contracted within Pathfinder? _____ hours per week

On average, how many hours per week do you spend **directly** with service users? ('Direct' = in the room with a service user)

_____ hours per week

On average, how many hours per week do you spend **indirectly** with service users? ('Indirect' = meetings concerning service users, supervision, consultation, reflective practice, writing reports/notes concerning service users, staff training)

_____ hours per week

On average, how often do you receive clinical supervision? _____

Do you ever attend reflective practice sessions? (please delete) Yes / No

If yes, on average how often do you attend reflective practice sessions? _____

Appendix D: Therapeutic Qualities Schedule Part B

We are interested in hearing about your personal experience of working within a Personality Disorder service. There are two questions on the following pages which ask for your personal thoughts. Please write as much as you wish (if the space provided is not enough, please continue on the reverse of the paper).

1. Are there any additional personal qualities/attributes/skills that you feel are important when working with clients with Personality Disorders? Please use the space below to make your suggestions:

2. I

Appendix D (continued)

3. It is sometimes possible for staff working in specialist Personality Disorder services to experience increased stress. What strategies do you find useful for minimising the stress you experience at work? Please use the space below to make your suggestions:

Appendix D (continued)

4. Is there anything you feel **your service** (ie. NHS trust, team management) could encourage/implement/introduce/promote to minimise the risk of burnout amongst clinicians within the service? Please use the space below to make your suggestions:

Thank you for your time.

Appendix E: Focus group Interview Schedule

Section A: Qualities needed

1. People talked a lot in their questionnaires about the need to be resilient in this kind of work. What does resilience mean to people?

Prompt: and what does resilience look like in practical terms

2. Are their additional stressors of working in Pathfinder which require additional/more/different resilience's, compared to other types of mental health work?

3. Here are some ideas about therapist skills, that came from the questionnaires: "Therapists should be able to identify with the positive aspects of the patient's behaviour", "Therapists need to be aware of their own limitations" and "therapists should be aware of their own needs". I wondered if these qualities were specific to forensic PD services or generic skills that are required to work as a therapist?

4. One recurring idea from the questionnaires was that humour was something that was needed to work effectively with people with personality disorders. I wonder if I could find out a little bit more about this...

Section B: Minimising stress and burnout

5. People identified that there were things already in place within the work environment which helped to minimise stress. This included regular supervision, informal supervision following a session, taking regular breaks and reflective practice. What is it about these things that helps to minimise stress and burnout?

6. Are there other things that could be done within the service to help with reducing stress and minimising the risk of clinician burnout?

Appendix E (continued)

7. People also seemed to feel that a good work/life balance was essential for staying well and minimising stress... I just wondered if I could hear a little bit more about this?

Prompt: i wondered if a work/life balance was something that is promoted within the service?

8. What other kind of activities do people find help reduce stress and burnout outside of work?

Prompt: based on some of the suggestions you've just made, are there anyways that any of these could somehow be incorporated into practice?

Section C: Process and ending

9. Is there anything we haven't mentioned that seems important to talk about in relation to stress, burnout or keeping oneself well?

10. What was this experience like? Does anyone have any closing thoughts or comments?

Round up, summary and thank you

Appendix F: Service Improvement Leaflet

Avon and Wiltshire NHS
Mental Health Partnership NHS Trust

Minimising the risk of Burnout

Information for Clinicians Working with Offenders with Personality Disorders

This leaflet was produced by:
Robert Chandler (University of Bath) and
Dr Andrew Newman (Avon & Wiltshire
Mental Health Partnership)

November 2014

About the project that contributed to this leaflet...

- A project was undertaken to explore burnout in forensic PD services, and to explore ways in which the risk of stress and burnout can be minimised
- 11 clinicians working within the Pathfinder service contributed to the findings.
- Questionnaire packs were given to clinicians, regarding levels of burnout; what things help to reduce burnout, and suggestions on useful therapeutic qualities that can help to minimise the risk of burnout

- Levels of burnout were found to be slightly higher than similar studies in the past
- Clinicians gave lots of suggestions as to the ways in which stress and burnout could be minimised and reduced

Research has suggested that working with service users with a diagnosis of Personality Disorder can be challenging. Furthermore, working in Forensic services with this client group can add another layer of risk and complexity. This can sometimes take its toll on clinicians and staff working with offenders with Personality Disorders, and increase the risk of staff 'Burning Out'

What is 'Burnout'?

One or more of the following might be thought of as 'Burnout':

- A sense of lacking personal accomplishment in one's work
- Feeling emotionally exhausted
- Feeling cynical of one's work or the service users with whom one works

How can Burnout be minimised?

All of the suggestions below were suggestions made by clinicians working with offenders with Personality Disorders:

Regular Supervision: sharing thoughts and feelings with supervisors, or during peer supervision, can be useful. It can allow one to spend some time reflecting and thinking about challenges with a piece of work. This can also be a useful space to reflect on caseload management.

Reflective Practice: this is an opportunity to reflect with the wider team about your practice, and sharing some of your thoughts and experiences with colleagues can be immensely helpful.

Mindfulness: mindfulness can be useful for noticing and paying attention to one's thoughts and emotions. It can be tempting to try and not let work 'get the better' of us, and to try and push away difficult emotions that may be encountered in our work; mindfulness can be useful for addressing unpleasant feelings. You can ask your line manager if there is currently a course running at work, or alternatively seek one outside of work.

Personal Therapy: some staff choose to have their own personal therapy, as it can be safe space in which to discuss both work related and personal stressors.

Informal 'debriefs' with your colleagues: connecting with colleagues (for example, after an appointment with a service user) might be useful: sharing thoughts can sometimes offer a different perspective.

Sharing humour: humour can be a way to lighten the mood and can also be a useful way to connect with colleagues.

Actively 'switching off': either during one's leisure time, or at times during the working day, it can be useful to do something that is not work related, which might require concentration; some people might find it helpful to go for a walk, exercise, cook, meditate or any number of different hobbies.

Taking regular breaks: the importance of taking regular breaks during the day should not be underestimated; the process of stopping and doing something 'normal' (for example, going to buy lunch, going for a short walk etc.) can be beneficial when one is working with material which can be alarming or unpleasant.

What attributes and approaches can contribute to effective working with Offenders with Personality Disorder?

Below are some suggested approaches that can be utilized when working with offenders with Personality Disorders. Some clinicians that work within the field felt that these were important to hold in mind when engaging in clinical work:

"Honesty and being genuine with service users."

"Having a sense of personal resilience"

"Compassion – both towards the self and towards service users"

"Humour"

"Setting appropriate boundaries"

"Having a sense of realistic optimism for service users and their situations"

"Remaining calm and considered, and trying where possible to be non-reactive"

"Maintaining a healthy work/life balance"

"Being safe and attuned to difficult emotions"

"At times being able to sit with uncertainly"

"Patient"

"Being able to think flexibly"

Appendix G: Theme table

Themes and focus group examples

Participant's names have been replaced with identification letters. The Jefferson Transcription System (Jefferson, 2004) was utilised; Capital letters are used to denote spoken emphasis, and (value) denotes a pause in speech.

Superodinate theme	Example
Grim reality **Theme**	
Complex and Multifaceted work	C: *"I find myself doing a number of different roles... work can be incoming from a number of different directions and sometimes that can be really difficult to manage and it multiplies, and that is actually something I've noticed has caused me some issues in terms of management, and feeling JUST exhausted".* *D: "one of the challenges in this line of work is that they're existential, a lot of the questions you're faced with [.] in terms of working with clients [.] constantly confronted with what's good about a human being [.] what has value in a life [.] what's worthwhile to work with when people [clients] are doing things that are kind of [.] what society says strips them of their rights".*
Toxic material	*B: "Working particularly with this client group... we're quite exposed to quite an extreme group, of perversion".* *C: "the kind of traits that will create splitting in teams … you've got some people [service users] who might be looking to push buttons".*
Heightened stress response	*B: "being in this toxic environment all day [.] and that may or may not be seeing services users [directly], I think a bit of both, it can be toxic in different ways... being locked up* *F: // coming into contact with a bit of normality is needed"* *D: "I think basically, you put yourself in a toxic environment [.] and a lot of things will stimulate your fear responses [1] if you allow that to remain at a high level for too long that's kind of [.] the quickest route to burnout... and even just reading about things that are horrific is going to trigger your brain [.] and go oh THIS is*

	scary".
Treading water	*C: "There's also something around managing expectations for me cos I came into this kind of work wanting to help people make changes in their lives and there is a real frustration [1] it can be quite sad sometimes, if you can't find a way forward for that person at that point in time"*
Team cultures	
"not very good at taking breaks"	*B: "... I was at [location] yesterday which is where some of our new colleagues are based, and at the end of the day I went to the corner shop to buy a drink before driving home, and thought, oh a shop, maybe people do this here, [laughs] and I thought [.] how nice and culturally, it was just a bit different".*
Eating in the office	*C: "when we first started there's a canteen on the floor above and then it got to a point where it was like, its more interesting to sit at my desk and exchange comments with my colleagues than sat in this canteen area by myself eating lunch [laughs]".*
Feelings of guilt for taking breaks	*D: "you feel guilty if you're not doing it [working], there's a tendency for each individual to do more than they should, cos they have that guilt punishing them for taking breaks".*
Physical environment not conducive to stopping	*A: "there's something about the design of this unit... so there's that table there which people sort of walk past and look busy and don't stop to talk if they are doing something and that's about it really so there's no place to stop and have lunch, so people work through lunch and work on computers or whatever else so institutionally it's not set up for that".*
Above and beyond culture	*E: "there has often been a culture of working very late".* *B: "there's quite a big expectation on this team, it's a relatively new service compared to other services, that we will do well and get on with it, and I think some of that is perpetuated in our own work and our own expectations of ourselves".*

Themes and Focus group examples

Superodinate theme	Example
An optimum of important qualities	
Theme	
Resilience – a complex construct	*A: "resilience is, suppose, toughness [agreeing mumurs]".* *B: "I think it's about having a sense of robustness… you need to have some kind of inner strength, some kind of tolerance… I think resilience is a complicated thing, I think there's different strands to it".*
Fluid and changing with experience	*C: "I think the professional one has developed with time and experience and wasn't there as much in my first year of doing this… I think I'm a lot more resilient over time".*
Too much = inflexibility	*A: "I think it gets me so far, and then after that, if I'm trying to be too rigid about things then I'm confronted by something that's grim, to put it mildly then I don't allow any form of reaction to that because I'm being TOUGH then it becomes counter-productive".* *B: "I wonder if it's a continuum actually [1] I wonder if too much resilience can make you tough minded or perhaps burnout and I wonder if it is similar to some other ideas thinking about because otherwise you could become a bit complacent, or yeah a bit too tough, and yeah not sensitive enough to the information, the feeling or the process because you're trying to be too resilient to try and get you through it".*
Humour – allows for flexibility of thinking	*D: "FOR ME my humour is about sort of logging with the absurdity of some of these things, no matter how things are ridiculous they are we can laugh about them, so for me that's what humour is about".* *B: "When I do it, it's not to humiliate it's to fulfil another function, sometimes things can get so dark and serious and heavy and*

	stressful that to have a bit of a joke or to see the, you know how ridiculous, or trivial side of something can just lift things for a moment". *A: "if I'm trying to get my head around something serious and nasty and difficult, and it feels like quite a personal thing to be able to offer different perspectives in whatever way, it humour can start to allow some flexibility, and well, I'm not just being nasty and serious all the time".*
Lifting mood	E: "*I think humour is a really effective way of changing a mood, and if someone is having an argument with someone and you can make them laugh you can, I think it's just really useful".*
Connection with colleagues	*E: "One function is that it allows you to connect with people in the team, when you're dealing with dark material [laughs] to find another way of looking at something so, an alternative perspective, but I guess it's also to quite, it's a defence isn't it, to allow some detachment from the [laughs] the really horrific, emotive things that we have to deal with".*
Releasing pressure from the system	
Actively switching off	*D: "it has to be quite active, you have to actively discharge, the things you've absorbed in the week, so sitting around relaxing doesn't quite cut it because it stays there with you, you have to find and activity that kind of taps into what you're feeling and purges that for you".*
Replenishment	*C: "Getting a dog forces me to go for a walk every morning regardless, so every morning before I go to work I have to go for a walk".* *A: "Sleep helps* *Researcher: // sleep's a good one* *B: // alcohol, but not too much of it!"* *B: "interestingly in the prison there is a gym and there is a culture of some of the staff use it after work some in lunchtime".*

Personal therapy/mindfulness	*F: "Another that has been useful I've had personal therapy and actually I've found that to be quite helpful just as a sort of [.] containing perhaps, and perhaps if there are some things on my mind, just having that additional support is useful".* *C: "A mindfulness group... that's a great idea, something i would really like to do".*
Supervision/reflective practice	*C: "It's important to know where you're at, what you should be taking to supervision, getting support with, with people who might [.] might not but might push buttons".*
Team bonding	*B: "having like a team lunch, just going into [building], taking lunch and sit on the grass if it's nice weather, and just sort of taking the time to down tools".*
Highlighting good practice	*B: "some support from the senior managers to say you're doing this well".*

Appendix H: Ethical Approval (Service Improvement Project)

Avon and Wiltshire NHS
Mental Health Partnership NHS Trust

Our Reference: 824AWP

Mr Robert Chandler
Clinical Psychologist in Training
Kingswood Community Learning Difficulties
Team Hanham Road
Kingswood
South Gloucestershire
BS15 8PQ

Hannah Antoniades
Research and Development
Avon & Wiltshire Mental Health Partnership NHS Trust
Blackberry Hill Hospital
Blackberry Centre
Manor Road
Fishponds
Bristol
BS16 2EW
0117 378 4267

hannah.antoniades@nhs.net

Date: 13 December 2013

Dear Mr Chandler,

Title of study: **Working with clients with Personality Disorders: therapeutic qualities, clinician burnout and suggestions for practitioner development**
Approval date: **13 December 2013**
End date: **31 July 2013**

Thank you very much for applying to undertake your research in AWP, we pride ourselves on a straight forward and rapid process for research governance and project management.

We are pleased to advise that we have been able to grant R&D Permission at Avon and Wiltshire Mental Health Partnership NHS Trust ("the Trust").

A condition of AWP R&D permission is to ensure you advise the department on a regular basis of the numbers you have recruited from AWP. You will be expected to provide us with the figures at the end of each financial year for the previous year. Failure to provide this information may result in your project being suspended until this information is provided.

We hope that you are successful in your recruitment aims and objectives. Please make sure that you let us know at the end of your study how it went by providing us with a copy of your final report. This way we can ensure those involved within the Trust are aware of your findings and can consider your recommendations. Please send a copy of your final report to awp.research@nhs.net

The R&D Permission in the Trust is valid until **31 July 2014**. If you require any extension to this in the future please contact us to arrange.

The documentation listed below has been received and all the relevant governance checks have now been completed.

I am therefore happy to provide R&D Permission for the above study across all locations within the Trust parameters.

Document	Version	Date
Confirmation of AWP Staff Support		09 December 2013
Confirmation of Ethics Approval		

Continued...

Appendix H (continued)

SIP Consent Info Debrief	V1	11 October 2013
Information Sheet	V1	11 October 2013
Consent Form	V1	11 October 2013
Questionnaire Pack	V1	11 October 2013

Please be aware that if there are any amendments to the above documents they must be sent to Hannah Antoniades, Research and Development Operations Manager for permission prior to use within the Trust.

You are reminded that you must report any adverse event or incident whether or not you feel it is serious, quoting the study reference number. This requirement is in addition to informing the Chairman of the relevant Research Ethics Committee. You are also required to submit to the Research and Development Operations Manager (Hannah Antoniades) a final outcome report on completion of your study, and if necessary to provide interim annual reports on progress. Should publications arise, please also send copies to Hannah Antoniades for inclusion in the study's site file.

You must also abide by the research and information governance requirements for any research conducted within the NHS:

- Work must be carried out in line with the Research Governance Framework which details the responsibilities of everyone involved in research.
- You must comply with the Data Protection Act 1998 and where required, have up to date Data Protection Registration with the Information Commissioners Office. Where staff are employed, this includes having robust contracts of employment in place and ensuring that staff are made aware of their obligations through training and similar initiatives.
- You must ensure that you understand and comply with the requirements of the NHS Confidentiality Code of Practice: (http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4069253)
- You must have appropriate policies and procedures in place covering the security, storage, transfer and disposal of information both personal and sensitive, or corporate sensitive information. Any information security breach must be reported immediately to the Trust.
- Where access is granted to sensitive corporate information, this must not be further disclosed without the explicit consent of the Trust unless there is an override required by law. Where disclosure is required under the Freedom of Information Act 2000, the Trust will assist you in processing the request.

This responsibility of adhering to the above is reliant on your academic supervisor Claire Lomax as they are the sponsor of your research.

Please note that, as a public authority, the Trust is obligated to comply with the provisions of the Freedom of Information Act 2000, including the potential disclosure of information held by the Trust in connection with this study. Where a request for potential disclosure of personal, corporate sensitive, or contract information is made under the Freedom of Information Act 2000, due regard shall be made to any duty of confidentiality or commercial interest.

Yours sincerely

Hannah Antoniades
Research & Development Operations Manager
Avon and Wiltshire Mental Health Partnership NHS Trust

CC: Andrew Newman (Placement Supervisor)
Claire Lomax (University of Bath Supervisor)

Appendix I: Ethical Approval (Main Research Project)

Part of the research infrastructure for Wales funded by the National Institute for Social Care and Health Research, Welsh Government.
Yn rhan o seilwaith ymchwil Cymru a ariannir gan y Sefydliad Cenedlaethol ar gyfer Ymchwil Gofal Cymdeithasol ac Iechyd, Llywodraeth Cymru

NISCHR RES
Gwasanaeth Moeseg Ymchwil | Research Ethics Service

Wales Research Ethics Committee 2
6th Floor Churchill House
17 Churchill Way
Cardiff
CF10 2TW

Telephone : 02920 376823
E-mail : carl.phillips@wales.nhs.uk
Website : www.nres.nhs.uk

29 July 2014

Mr R J Chandler
Trainee Clinical Psychologist
Taunton & Somerset NHS Trust
Department of Psychology
University of Bath, Bath
BA2 7AY

Dear Mr Chandler,

Study title:	**Early Life Victimisation and Compliance in people with Autism Spectrum Disorders (ASD).**
REC reference:	**14/WA/0184**
IRAS project ID:	**146691**

Thank you for your letter of the 22 July 2014, responding to the Committee's request for further information on the above research and for submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair.

We plan to publish your research summary wording for the above study on the HRA website, together with your contact details. Publication will be no earlier than three months from the date of this opinion letter.

Should you wish to provide a substitute contact point, require further information, or wish to make a request to postpone publication, please contact the REC Manager, Mr Carl Phillips, carl.phillips@wales.nhs.uk.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation [as revised], subject to the conditions specified below.

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

- Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.
- Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Appendix I (continued)

- Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk.
- Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission *for this activity*.
- For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.
- Sponsors are not required to notify the Committee of approvals from host organisations

Registration of Clinical Trials

All clinical trials (defined as the first four categories on the IRAS filter page) must be registered on a publically accessible database within 6 weeks of recruitment of the first participant (for medical device studies, within the timeline determined by the current registration and publication trees).

There is no requirement to separately notify the REC but you should do so at the earliest opportunity e.g. when submitting an amendment. We will audit the registration details as part of the annual progress reporting process.

To ensure transparency in research, we strongly recommend that all research is registered but for non clinical trials this is not currently mandatory.

If a sponsor wishes to contest the need for registration they should contact Catherine Blewett (catherineblewett@nhs.net), the HRA does not, however, expect exceptions to be made. Guidance on where to register is provided within IRAS.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Ethical review of research sites

NHS sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	Version	Date
Copies of advertisement materials for research participants [Advert_Bath University]	1	12 May 2014
Covering letter on headed paper [Covering Letter REC]	1	09 May 2014
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only) [Indemnity]	1	15 July 2013
IRAS Checklist XML [Checklist_23052014]		23 May 2014
IRAS Checklist XML [Checklist_21072014]		21 July 2014
Letter from sponsor [Sponsor_Letter]	1	08 May 2014

Appendix I (continued)

Letters of invitation to participant [Informant_Covering Letter]	2	21 July 2014
Letters of invitation to participant [Covering Letter_SEQOL]	1	12 May 2014
Letters of invitation to participant [Covering Letter_WADS]	1	12 May 2014
Non-validated questionnaire [ExperimentFactors_V1]	1	21 July 2014
Other [Everyone Included Summary 3]	1	21 July 2014
Other [Everyone Included Summary 2]	1	21 July 2014
Other [Everyone Included Summary]	1	21 July 2014
Participant consent form [SEQOL_Consent]	1	21 July 2014
Participant information sheet (PIS) [Informant_Debrief]	1	12 May 2014
Participant information sheet (PIS) [Participant_Debrief_Compliant]	1	12 May 2014
Participant information sheet (PIS) [Participant_Debrief_NonCompliant]	1	12 May 2014
Participant information sheet (PIS) [Information Sheet_Informant]	2	04 July 2014
Participant information sheet (PIS) [Information Sheet_Participant]	2	02 July 2014
REC Application Form [REC_Form_23052014]		23 May 2014
Research protocol or project proposal [Research Protocol]	1	12 May 2014
Response to Request for Further Information		22 July 2014
Summary CV for Chief Investigator (CI) [CV RJChandler]	1	30 April 2014
Summary CV for supervisor (student research) [CV AJRussell]	1	12 May 2014
Summary, synopsis or diagram (flowchart) of protocol in non technical language [Research_Flowchart]	1	12 May 2014
Validated questionnaire [The Autism Quotient 10]	1	21 July 2014
Validated questionnaire [Retrospective Bullying Questionnaire]	1	21 July 2014
Validated questionnaire [Schonell Reading Test]	1	21 July 2014
Validated questionnaire [Generalised Anxiety Disorder Scale]	1	21 July 2014
Validated questionnaire [Fear of Negative Evaluation Scale]	1	21 July 2014
Validated questionnaire [Rosenberg Self Esteem Scale]	1	21 July 2014

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Reporting requirements

The attached document *"After ethical review – guidance for researchers"* gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

Appendix I (continued)

The HRA website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

Feedback

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the HRA website: http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/

We are pleased to welcome researchers and R & D staff at our NRES committee members' training days – see details at http://www.hra.nhs.uk/hra-training/

14/WA/0184 Please quote this number on all correspondence

With the Committee's best wishes for the success of this project.

Yours sincerely

p.p.
Dr I Doull
Chair, Wales Research Ethics Committee 2
Email:carl.phillips@wales.nhs.uk

Enclosures: "After ethical review – guidance for researchers" [SL-AR2]

Copied:- Mr R J Chandler, Robert.Chandler@NHS.Net

Dr A Russell, A.J.Russell@bath.ac.uk

R&D office University of Bath, j.i.millar@bath.ac.uk

R&D office for the Avon & Wiltshire Mental Health Partnership NHS Trust, Hannah.antoniades@nhs.net

Appendix I (continued)

Part of the research infrastructure for Wales funded by the National Institute for Social Care and Health Research, Welsh Government.
Yn rhan o seilwaith ymchwil Cymru a ariennir gan y Sefydliad Cenedlaethol ar gyfer Ymchwil Gofal Cymdeithasol ac Iechyd, Llywodraeth Cymru

NISCHR RES
Gwasanaeth Moeseg Ymchwil | Research Ethics Service

Wales Research Ethics Committee 2
6th Floor Churchill House
17 Churchill Way
Cardiff
CF10 2TW

Telephone : 02920 376823
E-mail : carl.phillips@wales.nhs.uk
Website : www.nres.nhs.uk

9 April 2015

Mr R J Chandler
Trainee Clinical Psychologist
Taunton & Somerset NHS Trust
Department of Psychology
University of Bath, Bath
BA2 7AY

Dear Mr Chandler,

Study title:	**Early Life Victimisation and Compliance in people with Autism Spectrum Disorders (ASD).**
REC reference:	**14/WA/0184**
Amendment number:	**1**
Amendment date:	**10 February 2015**
IRAS project ID:	**146691**

The above amendment was reviewed at the meeting of the Sub-Committee held on the 9 April 2015.

The members of the Committee taking part in the review gave a favourable ethical opinion of the amendment on the basis described in the notice of amendment form and supporting documentation.

Approved documents

The documents reviewed and approved at the meeting were:

Document	Version	Date
Covering letter on headed paper		17 February 2015
Notice of Substantial Amendment (non-CTIMP)	1	10 February 2015
Other [Letter of Invitation]	1	14 March 2015

Membership of the Committee

The members of the Committee who took part in the review are listed on the attached sheet.

R&D approval

All investigators and research collaborators in the NHS should notify the R&D office for the relevant NHS care organisation of this amendment and check whether it affects R&D approval of the research.

1

Appendix I (continued)

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

We are pleased to welcome researchers and R & D staff at our NRES committee members' training days – see details at http://www.hra.nhs.uk/hra-training/

14/WA/0184:	**Please quote this number on all correspondence**

Yours sincerely

Dr I Doull
Chair, Wales Research Ethics Committee 2
E-mail: carl.phillips@wales.nhs.uk

Enclosures: List of names and professions of members who took part in the review

Copied:- Mr R J Chandler, Robert.Chandler@NHS.Net

Dr A Russell, A.J.Russell@bath.ac.uk

Dr K Maras, Katie.maras@bath.ac.uk

R&D office University of Bath, j.i.millar@bath.ac.uk

R&D office for the Avon & Wiltshire Mental Health Partnership NHS Trust, Hannah.antoniades@nhs.net

Appendix I (continued)

Avon and Wiltshire NHS
Mental Health Partnership NHS Trust

Our Reference: 853AWP

Mr R J Chandler
Trainee Clinical Psychologist
Taunton & Somerset NHS Trust
Department of Psychology
University of Bath, Bath
BA2 7AY

Hannah Antoniades
Research and Development
Avon & Wiltshire Mental Health Partnership NHS Trust
Blackberry Hill Hospital
Blackberry Centre
Manor Road
Fishponds
Bristol
BS16 2EW
0117 378 4267
hannah.antoniades@nhs.net

Date: 07 October 2014

Dear Mr Chandler,

Title of study: **Early Life Victimisation and Compliance in people with Autism Spectrum Disorders (ASD).**
Approval date: **07 October 2014**
End date: **31 August 2015**

Thank you very much for applying to undertake your research in AWP, we pride ourselves on a straight forward and rapid process for research governance and project management.

We are pleased to advise we are able to grant R&D Permission at Avon and Wiltshire Mental Health Partnership NHS Trust ("the Trust") to cover all locations within the Trust parameters.

Thank you for confirming you would like to use the Everyone Included method to recruit participants. We will discuss this with you further to ensure the correct procedures are followed for use of this method.

Your application states that you will be asking clinical teams to provide you with information about patients eligible to participate. We will only provide R&D Permission for you to review this patient identifiable information on site; you will not take this information away from trust premises, nor hold this data on university computers. Failure to comply with this will result in your R&D Permission being suspended.

We hope you are successful in your recruitment aims and objectives. Please make sure you let us know at the end of your study how it went by providing us with a copy of your final report. This way we can ensure those involved within the Trust are aware of your findings and can consider your recommendations. Please send a copy of your final report to awp.research@nhs.net.

The R&D Permission in the Trust is valid until **31 August 2015**. If you require any extension to this in the future please contact us to arrange.

Please also be aware if any amendments are required to the below documents they are forwarded for review and amended permission prior to use within the Trust.

The documentation listed below has been received and all relevant governance checks completed.

Document	Version	Date
Copies of advertisement materials for research participants [Advert_Bath University]	1	12 May 2014

We are a learning, teaching and research Trust; we aim to inform you about relevant opportunities unless you tell us otherwise

Continued...

Appendix I (continued)

Covering letter on headed paper [Covering Letter REC]	1	09 May 2014
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only) [Indemnity]	1	15 July2013
IRAS Checklist XML [Checklist_23052014]		23 May 2014
IRAS Checklist XML [Checklist_21072014]		21 July 2014
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Summary CV for Chief Investigator (CI) [CV RJChandler]	1	30 April 2014
Summary CV for supervisor (student research) [CV AJRussell]	1	12 May 2014
Summary, synopsis or diagram (flowchart) of protocol in non technical language [Research_Flowchart]	1	12 May 2014
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Validated questionnaire [Generalised Anxiety Disorder Scale]	1	21 July 2014
Validated questionnaire [Fear of Negative Evaluation Scale]	1	21 July 2014
Validated questionnaire [Rosenberg Self Esteem Scale]	1	21 July 2014

You are reminded you must report any adverse event or incident whether or not you feel it is serious, quoting the study reference number. This requirement is in addition to informing the Chairman of the relevant Research Ethics Committee. You are also required to submit to the Research and Development Manager (Hannah Antoniades) a final outcome report on completion of your study, and if necessary to provide interim annual reports on progress. Should publications arise, please also send copies to Hannah Antoniades for inclusion in the study's site file.

You must also abide by the research and information governance requirements for any research conducted within the NHS:

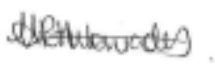
- Work must be carried out in line with the Research Governance Framework which details the responsibilities of everyone involved in research.
- You must comply with the Data Protection Act 1998 and where required, have up to date Data Protection Registration with the Information Commissioners Office. Where staff are employed, this includes having robust contracts of employment in place and ensuring that staff are made aware of their obligations through training and similar initiatives.

Appendix I (continued)

- You must ensure that you understand and comply with the requirements of the NHS Confidentiality Code of Practice: (http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4069253)
- You must have appropriate policies and procedures in place covering the security, storage, transfer and disposal of information both personal and sensitive, or corporate sensitive information. Any information security breach must be reported immediately to the Trust.
- Where access is granted to sensitive corporate information, this must not be further disclosed without the explicit consent of the Trust unless there is an override required by law. Where disclosure is required under the Freedom of Information Act 2000, the Trust will assist you in processing the request.

Please note that, as a public authority, the Trust is obligated to comply with the provisions of the Freedom of Information Act 2000, including the potential disclosure of information held by the Trust in connection with this study. Where a request for potential disclosure of personal, corporate sensitive, or contract information is made under the Freedom of Information Act 2000, due regard shall be made to any duty of confidentiality or commercial interest.

Yours sincerely



Hannah Antoniades
Research & Development Manager
Avon and Wiltshire Mental Health Partnership NHS Trust

Appendix I (continued)

Avon and Wiltshire NHS
Mental Health Partnership NHS Trust

Our Ref: 853AWP

Robert Chandler
Department of Psychology
University of Bath
Bath
BA2 7AY

Hannah Antoniades
Research and Development
Avon & Wiltshire Mental Health Partnership NHS Trust
Blackberry Hill Hospital
Blackberry Centre
Manor Road
Fishponds
Bristol
BS16 2EW
0117 378 4267
hannah.antoniades@awp.nhs.uk

30th April 2015

Dear Mr Chandler,

Title of study: **Early Life Victimisation and Compliance in people with Autism Spectrum Disorders (ASD)**
NREC ref: **14/WA/0184**
Amendment no: **1**
Approval date: **30 April 2015**
End date: **31 August 2015**

I am pleased to advise you that I have reviewed the amended documents (listed below) for the above study, and am happy for Avon and Wiltshire Mental Health Partnership NHS Trust to continue to be a site for this project.

I can confirm that we have received the Research Ethics Committee favourable opinion dated 9th April 2015 with the amendment approval request.

Document	Version	Date
Other [Letter of Invitation]	1	14 March 2015

Yours sincerely,

Hannah Antoniades
Research & Development Operations Manager
Avon and Wiltshire Mental Health Partnership NHS Trust

Appendix J: Guidelines for authors (Clinical Psychology Review)

Conflict of interest

All authors are requested to disclose any actual or potential conflict of interest including any financial, personal or other relationships with other people or organizations within three years of beginning the submitted work that could inappropriately influence, or be perceived to influence, their work. See also http://www.elsevier.com/conflictsofinterest. Further information and an example of a Conflict of Interest form can be found at: http://help.elsevier.com/app/answers/detail/a_id/286/p/7923.

Submission declaration and verification

Submission of an article implies that the work described has not been published previously (except in the form of an abstract or as part of a published lecture or academic thesis or as an electronic preprint, see http://www.elsevier.com/sharingpolicy), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder. To verify originality, your article may be checked by the originality detection service CrossCheck http://www.elsevier.com/editors/plagdetect.

Changes to authorship

This policy concerns the addition, deletion, or rearrangement of author names in the authorship of accepted manuscripts:

Before the accepted manuscript is published in an online issue: Requests to add or remove an author, or to rearrange the author names, must be sent to the Journal Manager from the corresponding author of the accepted manuscript and must include: (a) the reason the name should be added or removed, or the author names rearranged and (b) written confirmation (e-mail, fax, letter) from all authors that they agree with the addition, removal or rearrangement. In the case of addition or removal of authors, this includes confirmation from the author being added or removed. Requests that are not sent by the corresponding author will be forwarded by the Journal Manager to the corresponding author, who must follow the procedure as described above. Note that: (1) Journal Managers will inform the Journal Editors of any such requests and (2) publication of the accepted manuscript in an online issue is suspended until authorship has been agreed.

After the accepted manuscript is published in an online issue: Any requests to add, delete, or rearrange author names in an article published in an online issue will follow the same policies as noted above and result in a corrigendum.

Author Disclosure Policy

Authors must provide three mandatory and one optional author disclosure statements. These statements should be submitted as one separate document and not included as part of the manuscript. Author disclosures will be automatically incorporated into the PDF builder of the online submission system. They will appear in the journal article if the manuscript is accepted.

The four statements of the author disclosure document are described below. Statements should not be numbered. Headings (i.e., Role of Funding Sources, Contributors, Conflict of Interest, Acknowledgements) should be in bold with no white space between the heading and the text. Font size should be the same as that used for references.

Statement 1: Role of Funding Sources
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Author details	All contributing authors names should be added to the ScholarOne submission, and their names arranged in the correct order for publication. Correct email addresses should be supplied for each author in their separate author accounts The full name of each author must be present in their author account in the exact format they should appear for publication, including or excluding any middle names or initials as required The affiliation of each contributing author should be correct in their individual author account. The affiliation listed should be where they were based at the time that the research for the paper was conducted
Biographies and acknowledgements	Authors who wish to include these items should save them together in an MS Word file to be uploaded with the submission. If they are to be included, a brief professional biography of not more than 100 words should be supplied for each named author.
Research funding	Authors must declare all sources of external research funding in their article and a statement to this effect should appear in the Acknowledgements section. Authors should describe the role of the funder or financial sponsor in the entire research process, from study design to submission.
Structured Abstract	Authors must supply a structured abstract in their submission, set out under 4-7 sub-headings (see our "How to... write an abstract" guide for practical help and guidance): Purpose (mandatory) Design/methodology/approach (mandatory) Findings (mandatory) Research limitations/implications (if applicable) Practical implications (if applicable) Social implications (if applicable) Originality/value (mandatory) Maximum is 250 words in total (including keywords and article classification, see below). Authors should avoid the use of personal pronouns within the structured abstract and body of the paper (e.g. "this paper investigates..." is correct, "I investigate..." is incorrect).
Keywords	Authors should provide appropriate and short keywords in the ScholarOne submission that encapsulate the principal topics of the paper (see the How to... ensure your article is highly downloaded guide for practical help and guidance on choosing search-engine friendly keywords). The maximum number of keywords is 12. Whilst Emerald will endeavour to use submitted keywords in the published version, all keywords are subject to approval by Emerald's in house editorial team and may be replaced by a

	matching term to ensure consistency.
Article Classification	Authors must categorize their paper as part of the ScholarOne submission process. The category which most closely describes their paper should be selected from the list below. **Research paper.** This category covers papers which report on any type of research undertaken by the author(s). The research may involve the construction or testing of a model or framework, action research, testing of data, market research or surveys, empirical, scientific or clinical research. **Viewpoint.** Any paper, where content is dependent on the author's opinion and interpretation, should be included in this category; this also includes journalistic pieces. **Technical paper.** Describes and evaluates technical products, processes or services. **Conceptual paper.** These papers will not be based on research but will develop hypotheses. The papers are likely to be discursive and will cover philosophical discussions and comparative studies of others' work and thinking. **Case study.** Case studies describe actual interventions or experiences within organizations. They may well be subjective and will not generally report on research. A description of a legal case or a hypothetical case study used as a teaching exercise would also fit into this category. **Literature review.** It is expected that all types of paper cite any relevant literature so this category should only be used if the main purpose of the paper is to annotate and/or critique the literature in a particular subject area. It may be a selective bibliography providing advice on information sources or it may be comprehensive in that the paper's aim is to cover the main contributors to the development of a topic and explore their different views. **General review.** This category covers those papers which provide an overview or historical examination of some concept, technique or phenomenon. The papers are likely to be more descriptive or instructional ("how to" papers) than discursive.
Headings	Headings must be concise, with a clear indication of the distinction between the hierarchy of headings. The preferred format is for first level headings to be presented in bold format and subsequent sub-headings to be presented in medium italics.
Notes/Endnotes	Notes or Endnotes should be used only if absolutely necessary and must be identified in the text by consecutive numbers, enclosed in square brackets and listed at the end of the article.

Figures	All Figures (charts, diagrams, line drawings, web pages/screenshots, and photographic images) should be submitted in electronic form. All Figures should be of high quality, legible and numbered consecutively with arabic numerals. Graphics may be supplied in colour to facilitate their appearance on the online database. Figures created in MS Word, MS PowerPoint, MS Excel, Illustrator should be supplied in their native formats. Electronic figures created in other applications should be copied from the origination software and pasted into a blank MS Word document or saved and imported into an MS Word document or alternatively create a .pdf file from the origination software. Figures which cannot be supplied as above are acceptable in the standard image formats which are: .pdf, .ai, and .eps. If you are unable to supply graphics in these formats then please ensure they are .tif, .jpeg, or .bmp at a resolution of at least 300dpi and at least 10cm wide. To prepare web pages/screenshots simultaneously press the "Alt" and "Print screen" keys on the keyboard, open a blank Microsoft Word document and simultaneously press "Ctrl" and "V" to paste the image. (Capture all the contents/windows on the computer screen to paste into MS Word, by simultaneously pressing "Ctrl" and "Print screen".) Photographic images should be submitted electronically and of high quality. They should be saved as .tif or .jpeg files at a resolution of at least 300dpi and at least 10cm wide. Digital camera settings should be set at the highest resolution/quality possible.
Tables	Tables should be typed and included in a separate file to the main body of the article. The position of each table should be clearly labelled in the body text of article with corresponding labels being clearly shown in the separate file. Ensure that any superscripts or asterisks are shown next to the relevant items and have corresponding explanations displayed as footnotes to the table, figure or plate.
References	References to other publications must be in **Harvard** style and carefully checked for completeness, accuracy and consistency. This is very important in an electronic environment because it enables your readers to exploit the Reference Linking facility on the database and link back to the works you have cited through CrossRef. You should cite publications in the text: (Adams, 2006) using the first named author's name or (Adams and Brown, 2006) citing both names of two, or (Adams *et al.*, 2006), when there are three or more authors. At the end of the paper a reference list in alphabetical order should be supplied:
For books	Surname, Initials (year), *Title of Book*, Publisher, Place of publication.

	e.g. Harrow, R. (2005), *No Place to Hide*, Simon & Schuster, New York, NY.
For book chapters	Surname, Initials (year), "Chapter title", Editor's Surname, Initials, *Title of Book*, Publisher, Place of publication, pages. e.g. Calabrese, F.A. (2005), "The early pathways: theory to practice – a continuum", in Stankosky, M. (Ed.), *Creating the Discipline of Knowledge Management*, Elsevier, New York, NY, pp. 15-20.
For journals	Surname, Initials (year), "Title of article", *Journal Name*, volume, number, pages. e.g. Capizzi, M.T. and Ferguson, R. (2005), "Loyalty trends for the twenty-first century", *Journal of Consumer Marketing*, Vol. 22 No. 2, pp. 72-80.
For published conference proceedings	Surname, Initials (year of publication), "Title of paper", in Surname, Initials (Ed.), *Title of published proceeding which may include place and date(s) held*, Publisher, Place of publication, Page numbers. e.g. Jakkilinki, R., Georgievski, M. and Sharda, N. (2007), "Connecting destinations with an ontology-based e-tourism planner", in *Information and communication technologies in tourism 2007 proceedings of the international conference in Ljubljana, Slovenia, 2007*, Springer-Verlag, Vienna, pp. 12-32.
For unpublished conference proceedings	Surname, Initials (year), "Title of paper", paper presented at Name of Conference, date of conference, place of conference, available at: URL if freely available on the internet (accessed date). e.g. Aumueller, D. (2005), "Semantic authoring and retrieval within a wiki", paper presented at the European Semantic Web Conference (ESWC), 29 May-1 June, Heraklion, Crete, available at: http://dbs.uni-leipzig.de/file/aumueller05wiksar.pdf (accessed 20 February 2007).
For working papers	Surname, Initials (year), "Title of article", working paper [number if available], Institution or organization, Place of organization, date. e.g. Moizer, P. (2003), "How published academic research can inform policy decisions: the case of mandatory rotation of audit appointments", working paper, Leeds University Business School, University of Leeds, Leeds, 28 March.
For encyclopedia entries (with no author or editor)	*Title of Encyclopedia* (year) "Title of entry", volume, edition, Title of Encyclopedia, Publisher, Place of publication, pages. e.g. *Encyclopaedia Britannica* (1926) "Psychology of culture

	contact", Vol. 1, 13th ed., Encyclopaedia Britannica, London and New York, NY, pp. 765-71. (For authored entries please refer to book chapter guidelines above)
For newspaper articles (authored)	Surname, Initials (year), "Article title", *Newspaper*, date, pages. e.g. Smith, A. (2008), "Money for old rope", *Daily News*, 21 January, pp. 1, 3-4.
For newspaper articles (non-authored)	*Newspaper* (year), "Article title", date, pages. e.g. *Daily News* (2008), "Small change", 2 February, p. 7.
For archival or other unpublished sources	Surname, Initials, (year), "Title of document", Unpublished Manuscript, collection name, inventory record, name of archive, location of archive. e.g. Litman, S. (1902), "Mechanism & Technique of Commerce", Unpublished Manuscript, Simon Litman Papers, Record series 9/5/29 Box 3, University of Illinois Archives, Urbana-Champaign, IL.
For electronic sources	If available online, the full URL should be supplied at the end of the reference, as well as a date that the resource was accessed. e.g. Castle, B. (2005), "Introduction to web services for remote portlets", available at: http://www-128.ibm.com/developerworks/library/ws-wsrp/ (accessed 12 November 2007). Standalone URLs, i.e. without an author or date, should be included either within parentheses within the main text, or preferably set as a note (roman numeral within square brackets within text followed by the full URL address at the end of the paper).

Frequently asked questions

Do you publish open access articles?	For questions about open access, please visit the Open Access section of the website.
Is there a submission fee for the journal?	There are no submission fees for any of Emerald's journals.
What should be included in my paper's word count?	The word count for your paper should include the structured abstract, references, and all text in tables and figures. Each journal has a set word count parameter for papers – this information will be on the journal's homepage.

How can I become a reviewer for a journal?	Please contact the editor for the journal, with a copy of your CV, to be considered as a reviewer.
Who do I contact if I want to find out which volume and issue my accepted paper will publish in?	Firstly, log in to your author centre on the journal's ScholarOne site, click on 'Manuscripts with Decisions' and check the 'status' column of the table that will appear at the bottom of the page. If the editor has assigned your paper to an issue, the volume and issue number will be displayed here. If this information is not present, then the editor has not yet assigned your paper to a volume and issue. In this case you may email the editor of the journal to ask which volume and issue your paper is most likely to feature in.
Who do I contact if I have a query about ScholarOne?	If you are having a problem on ScholarOne please email the journal's Editor or the Emerald Content Editor for help and advice.
Is my paper suitable for the journal?	If, after reading the journal's aims and scope (available in the 'about the journal' section of the website), you are still unsure whether your paper is suitable for the journal, please email the journal's editor and include your paper's title and structured abstract. The journal editor will be able to advise on the suitability of your paper.

Appendix L: Guidelines for authors (Journal of Autism and Developmental Disorders)

MANUSCRIPT FORMAT
All JADD manuscripts should be submitted to Editorial Manager in 12-point Times New Roman with standard 1-inch borders around the margins.
APA Style
Text must be double-spaced; APA Publication Manual standards must be followed.
As of January 20, 2011, the Journal has moved to a double-blind review process. Therefore, when submitting a new manuscript, DO NOT include any of your personal information (e.g., name, affiliation) anywhere within the manuscript. When you are ready to submit a manuscript to JADD, please be sure to upload these 3 separate files to the Editorial Manager site to ensure timely processing and review of your paper:
A title page with the running head, manuscript title, and complete author information. Followed by (page break) the Abstract page with keywords and the corresponding author e-mail information.
The blinded manuscript containing no author information (no name, no affiliation, and so forth).
The Author Note

TYPES OF PAPERS
Articles, Brief Reports, Letters to the Editor, Commentaries
The preferred article length is 20-23 double-spaced manuscript pages long (not including title page, abstract, tables, figures, addendums, etc.) Manuscripts of 40 double-spaced pages (references, tables and figures counted as pages) have been published. The reviewers or the editor for your review will advise you if a longer submission must be shortened.
Special Issue Article: The Guest Editor may dictate the article length; maximum pages allowed will be based on the issue's page allotment.
A Brief Report: About 8 double-spaced pages with shorter references and fewer tables/figures. May not meet the demands of scientific rigor required of a JADD article – can be preliminary findings.
A Letter to the Editor is 6 or less double spaced pages with shorter references, tables and figures.
Style sheet for Letter to the Editor:
A title page with the running head, manuscript title, and complete author information including corresponding author e-mail information
The blinded manuscript containing no author information (no name, no affiliation, and so forth):-
- 6 or less double spaced pages with shorter references, tables and figures
- Line 1: "Letter to the Editor"
- Line 3: begin title (note: for "Case Reports start with "Case Report: Title")
- Line 6: Text begins; references and tables, figure caption sheet, and figures may follow (page break between each and see format rules)

REVIEW YOUR MANUSCRIPT FOR THESE ELEMENTS
1. Order of manuscript pages
Title Page with all Author Contact Information & Abstract with keywords and the corresponding author e-mail information.
Blinded Manuscript without contact information and blinded Abstract, and References
Appendix
Figure Caption Sheet
Figures

Tables
Author Note
MANUSCRIPT SUBMISSION
Manuscript Submission
Submission of a manuscript implies: that the work described has not been published before; that it is not under consideration for publication anywhere else; that its publication has been approved by all co-authors, if any, as well as by the responsible authorities – tacitly or explicitly – at the institute where the work has been carried out. The publisher will not be held legally responsible should there be any claims for compensation.
Permissions
Authors wishing to include figures, tables, or text passages that have already been published elsewhere are required to obtain permission from the copyright owner(s) for both the print and online format and to include evidence that such permission has been granted when submitting their papers. Any material received without such evidence will be assumed to originate from the authors.
Online Submission
Authors should submit their manuscripts online. Electronic submission substantially reduces the editorial processing and reviewing times and shortens overall publication times. Please follow the hyperlink “Submit online” on the right and upload all of your manuscript files following the instructions given on the screen.

TITLE PAGE
The title page should include:
The name(s) of the author(s)
A concise and informative title
The affiliation(s) and address(es) of the author(s)
The e-mail address, telephone and fax numbers of the corresponding author
ABSTRACT
Please provide an abstract of 120 words or less. The abstract should not contain any undefined abbreviations or unspecified references.
KEYWORDS
Please provide 4 to 6 keywords which can be used for indexing purposes.
TEXT
Text Formatting
Manuscripts should be submitted in Word.
Use a normal, plain font (e.g., 10-point Times Roman) for text.
Use italics for emphasis.
Use the automatic page numbering function to number the pages.
Do not use field functions.
Use tab stops or other commands for indents, not the space bar.
Use the table function, not spreadsheets, to make tables.
Use the equation editor or MathType for equations.
Save your file in docx format (Word 2007 or higher) or doc format (older Word versions).
Headings
Please use no more than three levels of displayed headings.
Abbreviations
Abbreviations should be defined at first mention and used consistently thereafter.
Footnotes
Footnotes can be used to give additional information, which may include the citation of a reference included in the reference list. They should not consist solely of a reference citation, and they should never include the bibliographic details of a reference. They should also not contain any figures or tables.

Footnotes to the text are numbered consecutively; those to tables should be indicated by superscript lower-case letters (or asterisks for significance values and other statistical data). Footnotes to the title or the authors of the article are not given reference symbols.
Always use footnotes instead of endnotes.
Acknowledgments
Acknowledgments of people, grants, funds, etc. should be placed in a separate section before the reference list. The names of funding organizations should be written in full.
BODY
The body of the manuscript should begin on a separate page. The manuscript page header (if used) and page number should appear in the upper right corner. Type the title of the paper centered at the top of the page, add a hard return, and then begin the text using the format noted above. The body should contain:
Introduction (The introduction has no label.)
Methods (Center the heading. Use un-centered subheadings such as: Participants, Materials, Procedure.)
Results (Center the heading.)
Discussion (Center the heading.)
HEADINGS
Please use no more than three levels of displayed headings.
Level 1: Centered
Level 2: Centered Italicized
Level 3: Flush left, Italicized
FOOTNOTES
Center the label “Footnotes” at the top of a separate page. Footnotes can be used to give additional information, which may include the citation of a reference included in the reference list. They should not consist solely of a reference citation, and they should never include the bibliographic details of a reference. They should also not contain any figures or tables.
Footnotes to the text are numbered consecutively; those to tables should be indicated by superscript lower-case letters (or asterisks for significance values and other statistical data). Footnotes to the title or the authors of the article are not given reference symbols.
Always use footnotes instead of endnotes. Type all content footnotes and copyright permission footnotes together, double-spaced, and numbered consecutively in the order they appear in the article. Indent the first line of each footnote 5-7 spaces. The number of the footnote should correspond to the number in the text. Superscript arabic numerals are used to indicate the text material being footnoted.
AUTHOR NOTE
The first paragraph contains a separate phrase for each author’s name and the affiliations of the authors at the time of the study (include region and country).
The second paragraph identifies any changes in the author affiliation subsequent to the time of the study and includes region and country (wording: “authors name is now at affiliation”.)
The third paragraph is Acknowledgments. It identifies grants or other financial support and the source, if appropriate. It is also the place to acknowledge colleagues who assisted in the study and to mention any special circumstances such as the presentation of a version of the paper at a meeting, or its preparation from a doctoral dissertation, or the fact that it is based on an earlier study.
The fourth paragraph states, “Correspondence concerning this article should be addressed to…” and includes the full address, telephone number and email address of the corresponding author.
TERMINOLOGY
Please always use internationally accepted signs and symbols for units (SI units).
SCIENTIFIC STYLE

Generic names of drugs and pesticides are preferred; if trade names are used, the generic name should be given at first mention.
Please use the standard mathematical notation for formulae, symbols etc.:
Italic for single letters that denote mathematical constants, variables, and unknown quantities
Roman/upright for numerals, operators, and punctuation, and commonly defined functions or abbreviations, e.g., cos, det, e or exp, lim, log, max, min, sin, tan, d (for derivative)
Bold for vectors, tensors, and matrices.

REFERENCES

Citation

Cite references in the text by name and year in parentheses. Some examples:
Negotiation research spans many disciplines (Thompson 1990).
This result was later contradicted by Becker and Seligman (1996).
This effect has been widely studied (Abbott 1991; Barakat et al. 1995; Kelso and Smith 1998; Medvec et al. 1999).

Reference list

The list of references should only include works that are cited in the text and that have been published or accepted for publication. Personal communications and unpublished works should only be mentioned in the text. Do not use footnotes or endnotes as a substitute for a reference list.
Reference list entries should be alphabetized by the last names of the first author of each work.

Journal article

Harris, M., Karper, E., Stacks, G., Hoffman, D., DeNiro, R., Cruz, P., et al. (2001). Writing labs and the Hollywood connection. Journal of Film Writing, 44(3), 213–245.

Article by DOI

Slifka, M. K., & Whitton, J. L. (2000) Clinical implications of dysregulated cytokine production. Journal of Molecular Medicine, doi:10.1007/s001090000086

Book

Calfee, R. C., & Valencia, R. R. (1991). APA guide to preparing manuscripts for journal publication. Washington, DC: American Psychological Association.

Book chapter

O'Neil, J. M., & Egan, J. (1992). Men's and women's gender role journeys: Metaphor for healing, transition, and transformation. In B. R. Wainrib (Ed.), Gender issues across the life cycle (pp. 107–123). New York: Springer.

Online document

Abou-Allaban, Y., Dell, M. L., Greenberg, W., Lomax, J., Peteet, J., Torres, M., & Cowell, V. (2006). Religious/spiritual commitments and psychiatric practice. Resource document. American Psychiatric Association.
http://www.psych.org/edu/other_res/lib_archives/archives/200604.pdf. Accessed 25 June 2007.

Journal names and book titles should be italicized.
For authors using EndNote, Springer provides an output style that supports the formatting of in-text citations and reference list.
EndNote style (zip, 3 kB)

TABLES

All tables are to be numbered using Arabic numerals.
Tables should always be cited in text in consecutive numerical order.
For each table, please supply a table caption (title) explaining the components of the table.
Identify any previously published material by giving the original source in the form of a reference at the end of the table caption.
Footnotes to tables should be indicated by superscript lower-case letters (or asterisks for significance values and other statistical data) and included beneath the table body.

Each table should be inserted on a separate page at the back of the manuscript in the order noted above. A call-out for the correct placement of each table should be included in brackets within the text immediately after the phrase in which it is first mentioned. Copyright permission footnotes for tables are typed as a table note.

ARTWORK AND ILLUSTRATIONS GUIDELINES

Electronic Figure Submission

Supply all figures electronically.

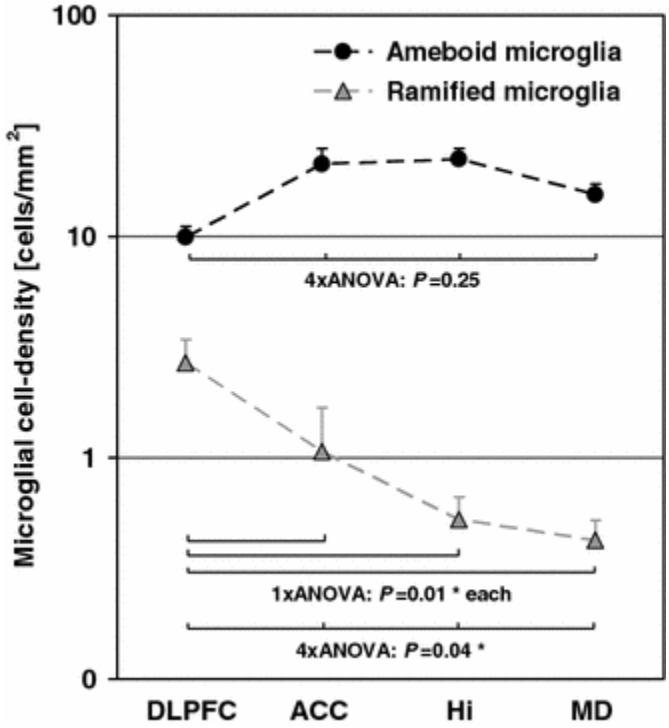
Indicate what graphics program was used to create the artwork.

For vector graphics, the preferred format is EPS; for halftones, please use TIFF format. MSOffice files are also acceptable.

Vector graphics containing fonts must have the fonts embedded in the files.

Name your figure files with "Fig" and the figure number, e.g., Fig1.eps.

Line Art



Definition: Black and white graphic with no shading.

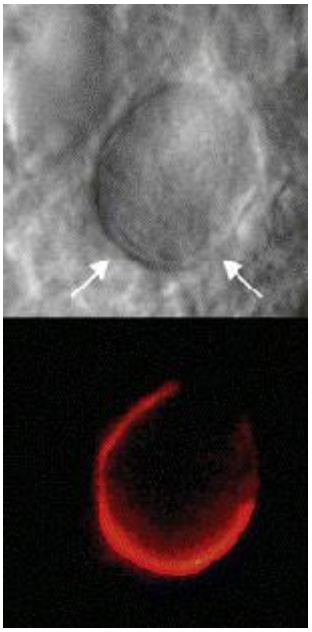
Do not use faint lines and/or lettering and check that all lines and lettering within the figures are legible at final size.

All lines should be at least 0.1 mm (0.3 pt) wide.

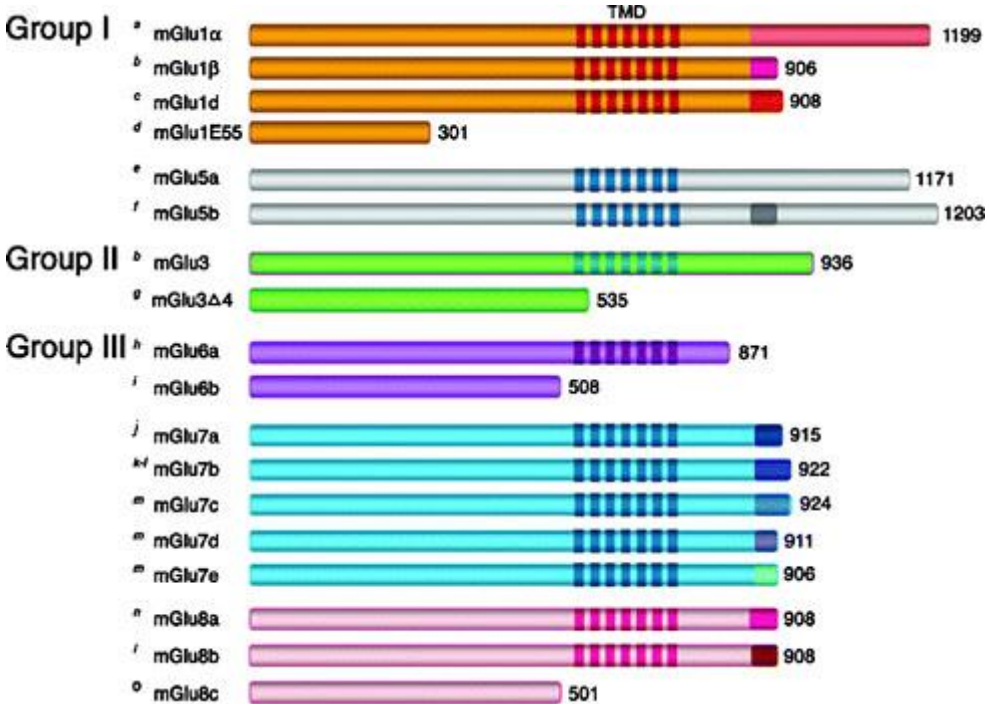
Scanned line drawings and line drawings in bitmap format should have a minimum resolution of 1200 dpi.

Vector graphics containing fonts must have the fonts embedded in the files.

Halftone Art



Definition: Photographs, drawings, or paintings with fine shading, etc.
If any magnification is used in the photographs, indicate this by using scale bars within the figures themselves.
Halftones should have a minimum resolution of 300 dpi.
Combination Art



Definition: a combination of halftone and line art, e.g., halftones containing line drawing, extensive lettering, color diagrams, etc.
Combination artwork should have a minimum resolution of 600 dpi.
Color Art
Color art is free of charge for online publication.
If black and white will be shown in the print version, make sure that the main information will still be visible. Many colors are not distinguishable from one another when converted to black and white. A simple way to check this is to make a xerographic copy to see if the necessary distinctions between the different colors are still apparent.

If the figures will be printed in black and white, do not refer to color in the captions. Color illustrations should be submitted as RGB (8 bits per channel).

Figure Lettering

To add lettering, it is best to use Helvetica or Arial (sans serif fonts).

Keep lettering consistently sized throughout your final-sized artwork, usually about 2–3 mm (8–12 pt).

Variance of type size within an illustration should be minimal, e.g., do not use 8-pt type on an axis and 20-pt type for the axis label.

Avoid effects such as shading, outline letters, etc.

Do not include titles or captions within your illustrations.

Figure Numbering

All figures are to be numbered using Arabic numerals.

Figures should always be cited in text in consecutive numerical order.

Figure parts should be denoted by lowercase letters (a, b, c, etc.).

If an appendix appears in your article and it contains one or more figures, continue the consecutive numbering of the main text. Do not number the appendix figures, "A1, A2, A3, etc." Figures in online appendices (Electronic Supplementary Material) should, however, be numbered separately.

Figure Captions

Each figure should have a concise caption describing accurately what the figure depicts. Include the captions in the text file of the manuscript, not in the figure file.

Figure captions begin with the term Fig. in bold type, followed by the figure number, also in bold type.

No punctuation is to be included after the number, nor is any punctuation to be placed at the end of the caption.

Identify all elements found in the figure in the figure caption; and use boxes, circles, etc., as coordinate points in graphs.

Identify previously published material by giving the original source in the form of a reference citation at the end of the figure caption.

Figure Placement and Size

When preparing your figures, size figures to fit in the column width.

For most journals the figures should be 39 mm, 84 mm, 129 mm, or 174 mm wide and not higher than 234 mm.

For books and book-sized journals, the figures should be 80 mm or 122 mm wide and not higher than 198 mm.

Permissions

If you include figures that have already been published elsewhere, you must obtain permission from the copyright owner(s) for both the print and online format. Please be aware that some publishers do not grant electronic rights for free and that Springer will not be able to refund any costs that may have occurred to receive these permissions. In such cases, material from other sources should be used.

Accessibility

In order to give people of all abilities and disabilities access to the content of your figures, please make sure that

All figures have descriptive captions (blind users could then use a text-to-speech software or a text-to-Braille hardware)

Patterns are used instead of or in addition to colors for conveying information (colorblind users would then be able to distinguish the visual elements)

Any figure lettering has a contrast ratio of at least 4.5:1

FIGURE CAPTION SHEET

The figure caption sheet contains a list of only the captions for all figures used. Center the label "Figure Captions" in uppercase and lowercase letters at the top of the page. Begin each caption entry flush left, and type the word "Figure", followed by the appropriate number and a period, all in italics. In the text of the caption (not italicized), capitalize only the first word and any proper nouns. If the caption is more than one line,

double-space between the lines, and type the second and subsequent lines flush left.
Table notes: Copyright permission footnotes for figures are typed as part of the figure caption.
Each figure should appear on a separate page. The page where the figure is found should have the figure number and the word "top"[ie, Figure 1 top] typed above the figure. Figures or illustrations (photographs, drawings, diagrams, and charts) are to be numbered in one consecutive series of arabic numerals. Figures may be embedded in the text of a Word or Wordperfect document. Electronic artwork submitted on disk may be in the TIFF, EPS or Powerpoint format (best is 1200 dpi for line and 300 dpi for half-tones and gray-scale art). Color art should be in the CYMK color space. Assistance will be provided by the system administrator if you do not have electronic files for figures; originals of artwork may be sent to the system administrator to be uploaded. *** After first mention in the body of the manuscript, a call-out for the correct placement of each figure should be included in brackets on a separate line within the text.
ELECTRONIC SUPPLEMENTARY MATERIAL
Springer accepts electronic multimedia files (animations, movies, audio, etc.) and other supplementary files to be published online along with an article or a book chapter. This feature can add dimension to the author's article, as certain information cannot be printed or is more convenient in electronic form.
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Supply all supplementary material in standard file formats.
Please include in each file the following information: article title, journal name, author names; affiliation and e-mail address of the corresponding author.
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Always use MPEG-1 (.mpg) format.
Text and Presentations
Submit your material in PDF format; .doc or .ppt files are not suitable for long-term viability.
A collection of figures may also be combined in a PDF file.
Spreadsheets
Spreadsheets should be converted to PDF if no interaction with the data is intended.
If the readers should be encouraged to make their own calculations, spreadsheets should be submitted as .xls files (MS Excel).
Specialized Formats
Specialized format such as .pdb (chemical), .wrl (VRML), .nb (Mathematica notebook), and .tex can also be supplied.
Collecting Multiple Files
It is possible to collect multiple files in a .zip or .gz file.
Numbering
If supplying any supplementary material, the text must make specific mention of the material as a citation, similar to that of figures and tables.
Refer to the supplementary files as “Online Resource”, e.g., "... as shown in the animation (Online Resource 3)", “... additional data are given in Online Resource 4”.
Name the files consecutively, e.g. “ESM_3.mpg”, “ESM_4.pdf”.
Captions
For each supplementary material, please supply a concise caption describing the content of the file.
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